

Preschool Children Within Their Social Structure

Vivienne Atkinson Chisholm

Ph.D.
University of
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This thesis is dedicated to Dr. Margaret Manning

Abstract

This thesis seeks to demonstrate the presence of a social structure based on the organisation of relationships in a group of preschool children. Analyses of interaction frequencies indicate the presence of four distinct friendship groups. Analyses based on semantic classifications of acts (mainly speech) were undertaken and these demonstrated that children do establish mutually meaningful interactions by which differential relationships are expressed. This is achieved through the selective use by the children of inclusive and exclusive behaviours whose distribution was found to conform to the distribution of interaction frequencies. It is argued that these behaviours provide the constitutive bases of the observed social structure by maintaining distinctions in inter-relationships. Subsequent analyses of pronominal references indicated that different degrees of mutual involvement are actively sought by children.

It is thus demonstrated that children are interested in the formation and maintenance of relationships per se and this leads to the conclusion that psychological research in this area has been constrained by the imposition of excessively restrictive paradigms. The social capacities of the young child have thereby been underestimated. Most research has tended to consider children's relationships within an analytic framework based on individual acts (e.g. Social Learning Theory) or individual cognitions (e.g. Piagetian Theory). This thesis concludes with the assertion that relationships evade explication within a paradigm that only allows for a study of the individual.

TABLE OF CONTENTS

	Page No.
Acknowledgements	i
CHAPTER 1: EARLY RELATIONSHIPS AND PSYCHOLOGICAL THEORY	1 - 38
CHAPTER 2: METHODOLOGY	39 - 57
CHAPTER 3: STRUCTURE	58 - 109
CHAPTER 4: COMMUNICATION	110 - 142
CHAPTER 5: EXCLUSION	143 - 182
CHAPTER 6: INCLUSION	183 - 266
CHAPTER 7: CONSIDERATIONS ON STRUCTURE	267 - 290
APPENDICES	291 - 297
BIBLIOGRAPHY	298 - 322

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Despite the above, I declare that this thesis was composed by myself.

CHAPTER 1: EARLY RELATIONSHIPS AND PSYCHOLOGICAL THEORY

"The fundamental fact of human existence is
man with man."

(Buber, 1947)

I Introduction

In traditional psychological theories, human co-existence is viewed as bi-phasic. The goals of the young child and those of society are initially apart, perhaps even antithetical, this dichotomy, ^{being} resolved by a process of induction called socialisation; i.e. the child renounces his personal goals, wishes etc. and assumes those of society as if they were his own.

A view of the relationship between the young child and society as essentially dichotomous has been approached in radically different ways by different psychological theories, the descriptions varying as a function of the degree or nature of initial 'sociality' ascribed to the young child. However, all rest upon the same basic premise that the child learns to co-exist with his fellow man such that socialisation becomes a "grafting process" (Tonkin, 1982; page 245). The learning theory child is asocial, the Freudian child narcissistic, the Piagetian child egocentric. Indeed a thematic affinity can be perceived between egocentrism and narcissism; both are ^{on the part of the child} definitionally predicated upon a postulated inability, to

differentiate between self and other. Piaget (1929) acknowledges this affinity, referring to narcissism as "absolute egocentricity" (page 175). All of these theories assume an initial self-interest that in some way conflicts with mutual or social interest. The null hypothesis is both proposed and assumed. The individual and the social are initially apart, the former marked by an initial state of ignorance of the latter.

The young child is on the threshold of society, a monolith that is subjectively apart and distinct from him. Thus Piaget (Piaget and Inhelder, 1969) asserts an identity between the "objectivization of the symbol and a socialization of the self" (page 129). Similarly, Bandura (1977) asserts that "successful socialization requires gradual substitution of symbolic and internal controls for external sanctions and demands" (page 43). We see here both theorists referring to symbolism as a tool of early thought. Piaget (e.g. 1951) argues that symbolism is the tool of pre-logical thought and is replaced by the word or the sign, the tool of logical thought. Freud (e.g. 1913) similarly describes symbolism as primitive thought, further asserting that it pervades the life span of the individual. The illogical (id) co-exists with the logical (ego), therein producing the need for repression and symbolism as the vehicle of expression of unconscious and socially unacceptable thoughts, viz. during dreams. But the point to be made

here is that all three theories use the term symbolism (though in radically different ways) to describe a particular form of early or primitive thought which is self-referenced and hence, an integral part of the initial dichotomy between child and society.

Socialisation is viewed as a progression from thinking in terms of 'me' to thinking in terms of 'we', though the interpretive frameworks within which this progression is described are theoretically distinct. Indeed, in both Freudian and Piagetian theory, formative episodes are described in dynamic terms as reactions to conflict. The criterial features of Freud's stages of development are defined in terms of psychosexual crises. Cognitive decentration is similarly a reaction to a crisis, i.e. the challenge posed by the external world and the subjective autonomy of the other. Adages such as 'Spare the rod and spoil the child' reflect fundamental attitudes towards childhood that receive formal expression in psychological theories.

The view that the young child is subjectively apart from others (i.e., not 'socialised') and that this distinction is resolved within a determinist framework has exercised a profound influence on research on early peer relationships. This is pertinent insofar as learning and cognitive theories are concerned since most research on preschool peer interactions is conducted and interpreted within their respective paradigms. The individual

rather than the inter-individual, is studied with a view to gleaning developmental changes. Hence, differences between adult relationships and those of young children are sought, rather than continuities, the guiding assumption being that developmental constraints preclude continuity. Moreover, if the child is assumed to be initially presocial, then the child/society antithesis will necessarily be resolved within a deterministic framework simply because the child is not intrinsically pre-disposed to being 'social'. This view is reflected in the research on early relationships of cognitive and learning theorists which is considered below.

II Learning Theory

In learning theory, explanations of ontogenesis rest upon a premise of extra-psychic determinism. Kuhn (1978) asserts that there are three axioms constituting the theoretical basis of this approach:

- i) overt behaviour is to be studied rather than hypothetical internal structures
- ii) behaviour is reducible to discrete units
- iii) behaviour is controlled by external stimuli.

Socialisation is thus viewed as a quantitative process, the child's behaviour with peers, ^{being} the net result of cumulative stimulus-response bonds. The strength of a bond is determined by contiguity and reinforcement

contingencies. Selectively applied reinforcement patterns determine differential rates of emission of socially acceptable versus unacceptable behaviours, thereby giving "meanings" (Bijou, 1970; page 45) to stimuli and responses.

According to some learning theorists, behaviour is explicable in terms of causal chains of antecedent stimuli and responses. Raush (1965) argues that an interaction can be explained contingently in terms of a causal chain of individual acts that generates a determinative sequence to the interaction:

"the major determinant of an act was the immediately preceding act. Thus, if you want to know what child B will do, the best single predictor is what child A did to B the moment before." (page 492)

This approach necessarily means that 'cause' can be defined statistically in terms of differential probabilities. Thus Patterson (1974) writes in a study of family interaction patterns of an aggressive child that,

"some aspects of the behaviour of one person constitute stimuli whose occurrence was associated with alteration in the probability of occurrence of certain social behaviours in the other." (page 900)

Social learning theorists argue that learning experiences derived from situations that antecede the ongoing interaction also exercise an influence (e.g. Bandura, 1977; Bandura, 1981; Mischel, 1973; Vasta,

1976). Thus, a determinative role is ascribed to cognition, mediational processes conceived in terms of internal representations of external events. Hence the nature of cognition is extrinsically determined by one's own experiences and further, by observations of the experiences of others (i.e., models). Though the addition of cognition to the theoretical model presents a more complex view of children's interactions, the thesis of extra-psychic determinism remains constant, as well as the focus on the individual child in investigations of relationships. Kuhn (1978) refers to social learning theory as a "'submodel' within the more general mechanistic model" (page 97). Previous experiences of others' or of one's own will generate behavioural expectancies that determine responses in future relevant situations. For example, the consequences of an act experienced by a model are all-important in determining whether or not imitation will occur. Exposure to a model experiencing pleasurable consequences will foster imitation, its converse will inhibit it. Further, models exercise differential degrees of influence according to their social importance, thus peers are particularly influential in the social development of the young child (e.g., Bandura, 1977).

Bandura (1981) and Mischel (1973) have referred to the influence these learned associations exercise on behaviour in information processing terms. For example,

Bandura (1981) asserts the importance of a concept of self-efficacy in personal relations, this in turn the result of the consequences of one's interactions with the environment:

"Self referent thought is initially derived from action and observational learning from occurrences of environmental events. The experiences arising from children's commerce with their environment provide the initial basis for development of a sense of personal efficacy." (page 211)

Social comparison processes are engaged in, initially in the family, and later in relationships with peers. A complex model of determinism thus emerges, conceptions of self-efficacy determining choice of peers as friends and the relationships themselves validating and developing the nature of self-referent thought.

Research in early relationships is conducted within a reductionist framework; the nature of an interaction is often explained in terms of acts emitted causing acts received, hence the focus on individual emission of behaviour in studies of the inter-personal. Act emitted determines act received such that children emitting reinforcing behaviours are more likely to be the recipient of reinforcing behaviours. Conversely, children emitting negative behaviours are more likely to receive negative behaviours (Charlesworth and Hartup, 1967; Strain and Shores, 1977; Masters and Furnam, 1981; Kohn, 1966). Interaction is often described in terms of

behavioural units linked together in a pattern of reciprocal determinism and a degree of 'inverted' agency is thereby ascribed to the young child in his relationships, e.g. "Thus children's behaviour patterns tend to set the occasion for that kind of social approach that validates, in a sense, their own approach to peers" (Strain and Shores, 1977, page 493).

Strain and Shores (1977) discuss the importance of "developing positive reciprocal interaction" (page 493), reciprocity in turn defined as "dyadic interaction in which persons A and B reinforce each other at an equitable rate" (page 495). Quantity is studied in isolation from quality with the assumption that it functions as cause. For example, Strain, Shores and Timm (1977) designed a program to increase socially isolated children's frequency of interaction by rendering teacher reinforcement contingent on the emission of positive social behaviours. However, frequency of social behaviours returned to baseline level on post-experimental observations, thus suggesting that contingencies inherent in the experimental situation did not effect change within the child himself. Others have attempted to increase interaction frequencies through exposing children to videotapes of child models receiving reinforcement when interacting with peers (Jakibchuk and Smeriglio, 1976; Keller and Carlson, 1974). Within a model of determinism, there logically has to be some 'Prime Cause' that gave rise to the state of social

isolation in the first place. *It is tautological to define 'Cause' in terms of immediately present chains of behaviour, i.e. to equate it with overt expression. A symptom is not a cause.*

Peer interaction is determined not only by social contingencies but also by physical contingencies. Bullock and Merrill (1980) argue that activity preferences exercise a determinative influence on the nature of the behaviour engaged in. Activities are "behaviour settings" that "produce systematic changes in those who are repeatedly exposed to them" (page 808). Hence, the activity is the independent variable, the child conversely, the dependent variable. Such an approach bears implications that extend beyond the statistical analysis of data to reflect the theoretical perspective within which the research is being conducted, i.e., the assumption of determinism.

Bullock's and Merrill's hypothesis was confirmed for a class of nine year old boys (but not for the girls in the class). A relationship between aggression scores and activity preference scores emerged on re-testing at the end of the year but not when the tests were initially administered at the beginning of the year. Bullock and Merrill argue that the relationship between the variables is "time-lagged" (page 811). Act is separated from actor. The relationships existing between children at the beginning and end of the year is not even addressed

though the aggression score is (a) based on peer assessment and, (b) specifically deals with aggression in the context of interactions e.g., "Who does things to bother and annoy others?", "Who pushes and shoves others out of the way" (page 809). Degree of acquaintanceship could account for the differential results yielded at the beginning and end of the year; i.e., the children knew each other better at the end of the year than at the beginning. Thus, an explanation could be that the children developed relationships with each other over the year, ^{rather} than the alternative one: ^{stated} "variables which show no synchronous relationship may nevertheless show time-lagged relationships" (page 811). However, Bullock and Merrill conclude within a deterministic framework, ascribing cause to activity rather than individuals:

"From genetics we know that a set of independently assorted factors interactively determines a self-regulated embryological process. Similarly, a diversely based set of preferences may determine a pattern of situational time allocation which leads to a specific course of psychological development."

(pages 813-814)

The above reflects a determinist view which is described succinctly by Blasi (1980):

"human action, like any other event, is caused by a finite number of elements and their interactions. Examples of elements are genes, stimulus-response associations, attitudes, and traits. In many cases, the situation is part of the elementary units that produce action"

(page 4)

This view constitutes an interpretive framework, both analytically and methodologically. In the above-cited Bullock and Merrill study, what is an intrinsically human characteristic and is manifest in relationships, is 'treated' as an intrinsic feature of a situation, i.e., the activity is the independent variable and the behaviour, the dependent variable. Cause is therein ascribed to a physical situation rather than to individuals and their relationships.

Heuristic categories of organization in themselves can reflect the interpretive framework encapsulating the behaviours of interest. Bullock and Merrill designed an aggression inventory in which items were rated on a nine point scale by graduate students:

"Our instructions directed them to base their ratings on tenets of social learning theory and their knowledge of change-inducing events."

(page 811)

However, activities itemized in the inventory differ in terms of degree of structure and degree of interpersonal contact involved, not to mention the fact that some of the activities presented are of a rather sedentary nature. More contact between individuals necessarily means that both aggressive and affiliative behaviours are more likely to occur. Thus it is different types of social situations that are also being juxtaposed in the aggression inventory: e.g., 'Playing leapfrog (4.81) versus singing songs (2.38)', 'Building model cars (3.06)

versus playing basketball (6.75)', 'Hanging around downtown with some friends (6.50) versus practising on a guitar (2.19)' (in brackets are the aggression ratings the different activities received). These activities are differentiated on the criteria of 'aggression-conduciveness', aggression thereby caused by the activity per se rather than the relationships occurring within these activities.

In Masters and Furman's study (1981), the relationship between popularity and friendship selection in four to five year old children was studied in terms of the following three categories of behaviour:

- (i) A priori reinforcement, e.g., giving help, gifts, smiling, laughing, compliance, cooperative play etc.
- (ii) A priori punishment: Non compliance, rejection, insults, quarrelling, attack etc.
- (iii) A priori neutral: All behaviours not included in the above two categories, e.g., conversation, associative play.

All of the above categories ~~define~~ the effect of an act upon the other. While the 'punishment' category is less problematic, ~~the~~ *dichotomising* behaviours into 'reinforcement' and 'neutral' categories is fraught with difficulties. The term 'reinforcement' presumably refers to a rewarding event, the term 'neutral' to an event that is 'neither here nor there' insofar as the recipient of the act is concerned.

The relegation of a behaviour to either category

necessarily reflects the use of an 'experiential gradient' constructed by the experimenter rather than by the child. Further, this gradient in the experimenter's mind is, by definition, relative to the social context, it cannot be perceived from a consideration of the act in isolation.

Theoretically, the categories should be associated with differential probabilities of continued interaction, the behaviours in the reinforcement category the most likely to produce a sustained interaction. This issue was not even addressed though the heuristic value of these categories as measures of peer interactions rests upon the outcome of such an analysis. It is therefore possible that socially distinct behaviours (in terms of outcome) may have been classified as functionally equivalent or, conversely, that socially similar behaviours were classified as functionally distinct. Moreover, rates of 'receiving' and 'dispensing' behaviours within these categories were coded separately, thus we don't know their pattern of distribution within an interaction. Indeed, this limitation is acknowledged by the authors.

All of the studies discussed are based on learning paradigms extracted from the laboratory and applied to 'real life' since the principles of learning should, theoretically, be constant across contexts. All approach the interpersonal in terms of individual emission of behaviour, the underlying assumption being that an interaction is the additive result of behavioural

units linked together within a thesis of reciprocal determinism. However, while environmental and social contingencies are amenable to control within an environment created by the experimenter, the same degree of control cannot be exercised in a nursery, for example. Categories such as reinforcement or Masters and Furman's category 'neutral', will cover such a vast array of behaviours that it becomes impossible to gauge qualitative processes that are doubtless differentially operative in different relationships. This necessarily reduces the explanatory power of the learning theory paradigm. Indeed, Hinde (1979) writes:

"If the learning paradigms are applied to real-life situations, it is important to remember that one is dealing with paradigms and not with processes." (page 206)

Masters and Furman note that actual rates of engaging in reinforcing or neutral acts are not related to specific friendship selection though they are related to popularity. This finding suggests that relationships are too complex for explication in causal chains of act and response. Children choose specific friends independently of each other though the tenets of learning theory would lead us to predict that certain children would be more desirable friends for all in the nursery simply because they engage more frequently in reinforcing behaviours. Observing others interacting with these popular children and experiencing pleasurable consequences should motivate

observers to interact with these children. Popularity and friendship selection are distinct. This finding escapes explanation within a learning theory paradigm:

"General rates of dispensing reinforcement or neutral acts were not related to specific friendship selection. Thus vicarious processes, such as observation of a child's behaviour towards other classmates, do not seem to play a major role in determining which children are selected as liked. Instead, the selection of liked peers was more related to a subject's own interaction with individual peers." (page 348)

Indeed, if we think of our own relationships, this finding makes sense. For example, someone known to several people may be acknowledged by all to be well-liked, i.e., popular, but that does not necessarily mean that everyone is great friends with him. As noted in the introduction to this chapter, children are assumed to have qualitatively different types of relationships than adults. Thus differences are sought rather than continuities.

Indeed, mediational processes are much more vaguely defined in social learning theory than in cognitive theory. We know that they are extrinsically determined and based on learned associations but how are they operative in day-to-day existence? Bandura (1981) writes that "modeling displays convey information about the nature of environmental tasks, the difficulties they present, and the predictability of environmental events" (page 208).

However, 'information' covers a multiplicity of discriminative stimuli that will be differentially salient to different children, hence associated 'difficulties' and 'predictability of environmental events' will also vary across children. The generalizability of the paradigm to children's daily interactions has not been demonstrated. For example, Bandura et al (1963) demonstrated in their classic study on aggression that young children were more likely to imitate a model receiving rewarding consequences yet this experiment was conducted in an experimental context with a 'Bobo doll' the target of aggression. Hartup and Coates (1967) found that preschool subjects exposed to an altruistic peer model displayed more altruism (as reflected in the allocation of trinkets) than peers not exposed to a model. However, it is not clear how principles of learning operative within an experimental context are similarly operative in say, a nursery in which, as stated above, children will be responding differentially to a multiplicity of discriminative stimuli outwith the experimenter's control and, possibly, apprehension. Within any nursery, a child may witness a peer being rewarded for an aggressive act, i.e., he gets the disputed object, yet imitation is not necessarily going to occur. Further, we don't know that a child's striking the Bobo doll constitutes an aggressive act per se. For example, it is not unusual to observe young children engage in 'rough and tumble' play, yet the intensity of

the physical contact involved does not in itself render the interaction aggressive. Similarly, equitable distribution of trinkets may occur in an experimental context on exposure to a peer model yet children don't necessarily imitate the prosocial behaviours of peers in their nursery. Indeed, Vasta (1976) notes:

"Although feedback effects seem to transfer to similar tasks, they probably do not transfer to tasks of a different nature."

(page 106)

It does appear that the paradigm adopted by learning theorists to study rearly relationships is excessively constraining. The assumption that the same basic principles operative in the laboratory can also be isolated as operative in real life contexts neglects the factor that interactions occur within specific social contexts created by the relationships existing between children. This is indeed strikingly illustrated in the results of Masters' and Furman's (1981) study in which children were found to be differentially responsive to peers within their nursery. Theorized causal links between behaviour emitted and behaviour received cannot account for the high degree of selectivity that children display in their interactions with each other. As Manning (1981) writes:

"It is necessary to assess their meaning in the context in which they occur." (page 153)

A rigidly deterministic thesis and a neglect of social

context thus diminish the explanatory power of the learning theory paradigm in its investigations of early relationships.

III Cognitive Theory

In cognitive theory, ontogenesis rests upon a premise of intra-psychic determinism. Mediation processes are therefore intrinsically determined. Development is described as a progression of sequentially invariant stages characterized by increasing differentiation of cognitive structures. The organization of cognition conforms to logico-mathematical principles (e.g. Piaget and Inhelder, 1969; Furth, 1978; Selman, 1976). For example, Piaget and Inhelder write:

"When he reaches the level of operations, he will by that very fact be capable of cooperation."
(page 129)

(Cooperation presupposes a knowledge of reversible operations.) Hence, the assertion that development conforms to an invariant sequence of stages is a necessary result of this primary assumption. Feldman and Toulmin (1975) address this issue, writing:

"Many contemporary psychologists . . . argue for the existence of characteristic 'stages' in cognitive development. The Piagetians, for example, characterize each of these stages in terms of a set of 'formal structures'; they claim that the relationships between the characteristics of

successive stages are themselves logical relationships, being based on 'logical inclusion'. Thus, it is by now widely accepted that there is a compulsory sequence of developmental stages through which all children must pass in the same order, and that each stage in this sequence is characterized by the existence in the child's mind of corresponding 'mental structures'." (pages 409-410)

The explication of ontogenesis in terms of structures and stages is, of course, an anathema to learning theorists since their theoretical framework definitionally excludes such a possibility. The concept of cognitive structuration following a developmental sequence necessarily means that internal states circumscribe the potential breadth of experience whereas in learning theory the inverse held, the breadth of potential experience is predicated upon external contingencies. This distinction is fundamental. Indeed, the essential difference between the quantitative and qualitative approaches is manifest in their contrastive interpretations of functionally similar events:

"During exposure observers acquire mainly symbolic representations of the modeling activities which serve as guides for appropriate performances."

(Bandura, 1977; page 24, my emphasis)

"But though he imitates what he observes, and believes in perfect good faith that he is playing like the others, the child

thinks of nothing at first but of utilizing these new acquisitions for himself. He plays in an individualistic manner with material that is social. Such is egocentrism." (Piaget, 1932; page 33, my emphasis)

In social learning theory, exposure to a model is in itself a sufficient condition for imitation to occur whereas this is a theoretical impossibility in cognitive theory. As Youniss (1978) writes:

"The other's behaviour does not flow in pure form into the child because the child cognitively acts on it and transforms it in order to incorporate it." (page 205)

Social development is governed by cognitive development and is therefore part of an epistemological process, e.g., "the child discovers people in exactly the same way as he discovers things" (Piaget, 1926, page 272). The child's capacity for interpersonal relations is predicated upon certain immutable invariants, the prima facie example being egocentrism which *is presumed* to pervade all aspects of the young child's life. Piaget (1929) describes it as "ontological" (page 189), writing elsewhere (1926) that "Social ego-centrism may be recognized as a particular form of epistemic ego-centrism" (page 272, my emphasis).

Piaget therefore explains social development in terms of the decline of the primacy of the ego. Indeed he argues (1932) that the genesis of 'personality' lies within

the interpersonal sphere. Awareness of self presupposes awareness of other:

"cooperation is really a factor in the creation of personality, if by personality we mean, not the unconscious self of childish egocentrism, nor the anarchical self of egoism in general, but the self that takes up its stand on the norms of reciprocity and objective discussion, and knows how to submit to these in order to make itself respected. Personality is thus the opposite of the ego." (page 91)

Children under seven years old (i.e., at the preoperational stage) are essentially presocial; Piaget (1926) asserts that "there is no real social life between children of less than seven or eight years" (page 40). Egocentrism precludes awareness of the subjective autonomy of the other, hence the child's "minimum of socialization" (Piaget and Inhelder, 1969, page 117). Early interactions are fragile and marked by an absence of a desire to communicate, "the child under seven thinks egocentrically, even in the society of others" (Piaget, 1926; page 40). Thus Piaget argues that at preschool age, individual and social life are not really differentiated.

With the decline of egocentrism, the child progresses from play activities based on the assimilation of experience to games based on accommodation to experience in communication with others. Within the former, external reality is bent to the will of personal whim ("filtering or modification of input", (Piaget and Inhelder, 1969, page 6)), encapsulated within rites or symbols that are subjectively

(internally) defined and maintained. Conversely, play activities based on accommodation require that personal will be superseded by the demands of external reality ("modification of internal schemes to fit reality" (Piaget and Inhelder, 1969, page 6)), encapsulated within rules that are objectively (externally) defined and maintained, i.e., games with rules. Indeed, this distinction between symbols/rites and rules is central to the Piagetian thesis on the development of interpersonal relations.

Symbols are the tools of fantasy, rendering the child a master of an illusory reality. "Just as he makes his own truth, so he makes his own reality" (Piaget, 1929; page 189). Because symbols are the tools of intra-psychic activity (of "ludic assimilation" (Piaget, 1951; page 119) and are therein subjectively based, Piaget (1951) does not view collective symbolic play as more socially significant than individual symbolic play:

"We shall not make an essential distinction between individual symbolic games and those involving two or more persons. Symbolism begins, indeed, with individual behaviours which enable imitation to be interiorised . . . and symbolism involving more than one makes little change in the structure of the first symbols." (page 112)

Piaget (Piaget and Inhelder, 1969) argues that the child's social world consists of "two very distinct realities" (page 116) comprised of his relationships with

adults and those with peers. The two are functionally distinct, relationships with adults serving an essentially didactic function (e.g. cultural, moral etc.) and thus not characterized by reciprocity. True interpersonal relationships develop from interactions with peers which force the child to coordinate his viewpoint with those of others in order for true communication to occur. Piaget and Inhelder (1969) describe this process as "reciprocal socialization" (page 116); however, it is not clear how experience interacts with cognition. For example, in an earlier work Piaget (1926) asserts that "the fact of being or of not being communicable is not an attribute which can be added to thought from the outside, but is a constitutive feature of profound significance for the shape and structure which reasoning may assume." In later writings, Piaget (e.g. Piaget and Inhelder, 1969) similarly explains the interpersonal in terms of intra-individual change engendered by cognitive growth and differentiation. What type of social experiences are important and how they directly interact with cognitive development is not explained. Thus, Light (1979) writes that "in practice he has tended to preserve the isolated individual approach which has so frequently characterized the study of cognitive development" (page 6). The interpersonal is ultimately the result of intra-personal processes.

Piaget's influence on the study of children's relationships has been pervasive, generating a large body

of research that has investigated the development of friendships within his cognitive framework. Thus the assumption that the development of the inter-individual is predicated upon intra-individual processes is intrinsic to their approach and the theme of intra-psychic determinism thereby remains constant. A child's interpretation of, and subsequent response to, any social event is therefore determined by his present level of cognitive development. Two Piagetian premises are central to their research:

- (i) the structure of the preschool child's actions upon his social world are isomorphic with those upon his physical world (e.g. Selman, 1976; Broughton, 1978)
- (ii) the preschool child is egocentric (e.g. Youniss, 1978; Livesley and Bromley, 1973)

Many theorists assert that the child's growing awareness of others conforms to an invariant sequence of stages (e.g. Selman, 1980; Bigelow, 1978; Kohlberg, 1969; Damon, 1983;). Indeed Selman and Jaquette (1977) succinctly captures the interpretive framework within which children's awareness of their relationships is placed in his following assertion:

"It is the developmentalist's task to chart progression in understanding of each of those processes as it goes through an ontogenetic sequence of cognitive stages." (page 267)

A stage-like model necessarily means that a child's potential range of interpretive responses to any social event will necessarily be circumscribed within the limits set by his present level of cognitive development. According to Selman (1977; 1980; 1981), the preschool child is at Stage 0 of his theoretical framework of interpersonal awareness. His interpersonal relationships are based on physicalistic connections, his friend being whomever he happens to be playing with at the moment, this in turn being determined by proximity. The child is aware of the other as a physical entity but not as an independent psychological entity. Interactions are viewed as getting what one wants, wants referring to physical objects (e.g. a bicycle) rather than desire for friendship. This stage endures till the age of seven when the child enters the preoperational stage.

Selman's assertions are substantively consonant with those of other theorists working within the same interpretive framework. Using children's essays as his data base, Bigelow (1977) asserts that friendship expectations follow a sequentially invariant model comprised of three stages. Six year old children are at the first stage "situational", defining relationships in terms of meeting their own needs and wants. The child's interest in the other is based on personal involvement in an activity, thus proximity is an evaluative basis of others at this age. Bigelow describes the friendship 'cognitions' of

these children as reflecting "the more superficial aspects of friendship" (page 251). Hayes (1977) reports similar findings in his investigations. Similarly, Youniss and Volpe (1978) see the young child's conceptions of friendship as being initially self-referenced. Younger children (6 to 7 years old) describe friendship in terms of physical aspects of the interaction, e.g. sharing toys or playing together. They do not apprehend peers in terms of personal characteristics or states.

Youniss (1978) writes that "the child's present level of cognitive functioning is the basis for interpreting the meaning of socializing events" (page 209). As stated previously, the determinist thesis that the child's capacity for interpersonal relations is predicated upon intrapersonal processes is a primary assumption of this approach. For example, Hayes entitles his study, based on verbal reports, "Cognitive Bases of Liking and Disliking Among Preschool Children". Implicit is the assumption that overt expression directly corresponds to internal mediational processes and further that we can study relationships through gauging the latter. Hence Damon (1983) writes in a chapter dealing with peer relations in his recent text:

"With age, children develop a conception of friendship as a continuing stable relation that has a significance beyond the immediate interchange." (page 143)

Implicit in this research approach is the view that

children are providing in their verbal reports functional descriptions of relationships, which at the preschool level are believed to be physically based. Thus Youniss and Volpe (1978) assert that "children are able to translate actions into their concept of friendship as is shown in their agreement about which interactions signify friendship" (page 14). However, asking children to contemplate their relationships in isolated contexts may pose its own set of problems:

"In the very early stages, before the child has developed a full awareness of language, language is embedded for him in the flow of events which accompany it. So long as this is the case, the child does not interpret words in isolation - he interprets situations"

(Donaldson, 1978, page 88)

Verbally reflecting upon a relationship in vacuo is fundamentally distinct from maintaining that relationship within an interaction.

Research conducted within the area of moral reasoning yields a similar portrait, also asserting an initial self-interest. For example, Kohlberg (1969) describes stages of moral development based on the premise that inherent in socialisation is the capacity to resolve the interests of the self in a way that doesn't exclude the interests of others. Role-taking opportunities provided by the school, home etc. are asserted to be crucial to the child's understanding of social rules (i.e., moral concerns). According to Kohlberg, role-taking is definitionally implicit in

the term 'social':

"the primary meaning of the word 'social' is the distinctively human structuring of action and thought by role-taking, by the tendency to react to the other as someone like the self and by the tendency to react to the self's behaviour in the role of the other." (page 398)

The interpersonal relations of the preschool child do not need the criteria delineated in Kohlberg's definition. The interests of the other are necessarily excluded from view by the constraints inherent in egocentrism. As with his conceptions of friendship, the preschool child apprehends the other on a physicalistic basis, actions judged in terms of physical consequences rather than psychological ones. Damon (1983), in his stages of justice, similarly posits the primacy of self-interest at the preschool level.

A constant portrait prevails over this research, one moreover that is wholly consonant with that presented by Piaget. The concept of egocentrism is invoked as both cause and explanation. For example Selman (1982) entitles the preschool child's level of social perspective taking, "Egocentric or undifferentiated perspectives" (page 66). Youniss (1978) refers to it in aetiological terms as a "capacity restriction":

"With each step towards maturity, children are more able to free themselves from private interpretations and come closer to understanding social reality as other persons understand it."

(page 209,
my emphasis)

As noted earlier, if an initial antithesis between child and society is assumed, then it follows that this dichotomy will be resolved within a determinist framework since the child must necessarily go through a specific process of socialisation.

Indeed, Piaget's bifurcation of early interpersonal relationships into those with adults on the one hand and those with peers, on the other, is similarly evident in the research of the theorists considered above (e.g. Damon, 1983; Youniss, 1978; Selman, 1982). For example, Selman describes young children's understanding of parent-child relations as 'Boss-servant' relation. Damon argues that children will seek each other out for companionship but perceive parents within a nurturant, didactic role. Youniss argues that they are two distinct interpersonal spheres, possibly sources of different types of social understanding. The social only really comes into being through interactions with peers hence the discontinuity between the child's experiences at home and those when he enters the nursery. Relationships with adults do not demand reciprocity and coordination of viewpoints - those with peers do.

However, assertions of discontinuity in the child's social life may not be wholly justified. Reddy (1983) has demonstrated that didacticism can occur within the context of reciprocally structured interactions between parent and child. Light (1980) reports a direct

relationship between role-taking score and the nature of four year old children's relationships with their mothers. Children whose mothers considered them as if they were equals, i.e., persons in their own right, attained a higher score than children whose mothers viewed the relationship in a more authoritarian perspective. Thus Light asserts that maternal relationships may exercise a critical influence in the development of social sensitivity. Whilst there are obvious differences between a young child's relationship with his mother and those with peers, the two may not be functionally discrete to the extent proposed by Piaget and others. These findings challenge the exclusive emphasis placed on peer-peer relationships and on the acquisition of certain logical operations, e.g. reversible relations, in overcoming egocentrism. Further, they suggest that individual differences may be operative in childhood just as they are in adulthood:

"In children just as in adults, it may be appropriate for some purposes to treat role-taking as a disposition, or 'habit of thinking', rather than a series of quasi-logical acquisitions. This approach naturally undermines attempts at structural analysis in terms of developmental stages. Indeed it suggests that the same kinds of things which govern individual differences in adulthood may also govern comparable individual differences amongst children"

(Light, 1980, page 140,
my emphasis.)

Other research evidence also suggests that relationships with adults and with peers may not be discontinuous. Bearison and Cassel (1975) found that six year old children from person-oriented families (based on maternal reports) were more able to accommodate their communication to the perspective of blindfolded listeners than children from more authoritarian position-oriented families. Radin (1973) reports a direct relationship between paternal nurturance (e.g. meeting needs of child, asking information) as observed in fathers' interactions with their preschool sons and intellectual functioning a year later. Manning (1980) found a relationship between types of aggressive behaviours and maternal relationships in young children. Montagner et al (1974) have also demonstrated a relationship between family environment and aggressive expression. (This research will be discussed in greater detail in Chapter 3). This research suggests that aligning children along a developmental yardstick that contains implicit normative standards and performative expectations may place a blanket of homogeneity over heterogeneously distinct groups.

The above challenges the assertion that the child's social world consists of two functionally discrete realms. If, on the other hand, continuity does prevail, then when the child does come into contact with peers, he may not be as limited as has been held. The research on young children's relationships cited above proceeded on the

primary assumption that interpersonal contact is constrained by the limits inherent in egocentrism and that the ability to form true relationships is predicated upon intra-personal change. All examined the individual child abstracted from his social context yet made assertions about the nature of the child's functioning within that context. Glick (1978) asserts that social knowledge can only really be observed in the context within which it is operative:

"Knowledge for an actor is governed as much by its conditions of application (Glick, 1975, 1977) as it is by its structure as a known field of information. Two bodies of knowledge must intersect: knowledge of a domain of information and knowledge of the domain of application. Yet it is likely that application rules are obeyed and not 'known' as a cognitive object. In much the same way that we use appropriate syntax without being able to talk explicitly about grammar, or follow rules of conversational sequencing (Sacks, Schegloff, and Jefferson, 1974) without being able to describe them, we probably know about sociability without that knowledge being explicit. In fact, in the social domain it is most likely that tacit knowledge (Bransford and McCarrell, 1974; Franks, 1974; Turvey, 1974) is pre-eminently important." (page 5)

Trevarthen's (1979) research demonstrating that infants and mothers enter into cooperative relationships based on mutual regulation and control further challenges the assertion that intrapersonal constraints preclude

interpersonal contact at the preschool level. At the age of two months, infants can be observed engaging in expressive and gestural communication with their mothers, structured within a turn-taking dialogue. Further, when the mother does not respond appropriately, i.e., does not support or complement his communicative attempts, the infant becomes distressed. This interaction is only evident when the behaviours of both the mother and her infant are observed. Consideration of either in isolation of the other necessarily provides a distorted view of the interaction:

"It emerges from complete descriptions that both partners exercise control." (page 544)

Trevarthen argues that infants are born with a capacity for communication, that an inherent intersubjectivity - i.e. understanding of others - regulates cooperative interactions and "impels humans to cooperation in awareness and purpose" (page 531). Interpersonal contact is actively sought and maintained as a goal in itself. Further, a child can only realize his social capacities through contact with the other:

"The intersubjectivity to be seen in the infant is evidently not a self-sufficient, genetically specified faculty. Though robust, it depends on complementary functions of other humans."

(page 531)

The research considered suggests that relationships evade both causal and descriptive explication in intra-

individualistic terms. The two present, in any event, a contradiction in terms, a relationship by definition referring to inter-individualistic processes rather than to internal mediational processes of isolated interactants. The isolated thoughts of the child 'in vacuo' are being used as material from which theoreticians abstract his social world, hence abstractions are necessarily being made from abstractions. The methodological procedure is in itself intrinsically problematic. Further, the child's behaviour is being 'fitted' into a paradigm which assumes egocentrism. Hence when the child describes a peer in physicalistic terms, it follows that this is because he is subjectively unaware of the other because he is egocentric. As Toulmin and Feldman (1975) write:

"the actual observed behaviour has to be passed through a filter of scientific interpretation before we can see whether it any way supports or fails to support the theoretical claims in question. First the subject's actions must be scrutinized and classified as displaying certain systematic properties: only then can these interpreted properties be related to the theoretical mental structures . . . The actions of a child cannot by themselves either corroborate or refute directly the claim that a child has any particular mental structure." (page 413)

As noted above, the assertion that behaviour is ultimately endogeneously determined has theoretically rendered inter-individual processes a result of its converse such that

mediational processes are the focus of empirical research. Yet what happens when two like-minded 'thinkers' meet and how these internal constraints are operative within an interaction has not been addressed. As Glick (1978) writes:

"The social world is not only 'known about',
it is acted within." (page 5)

IV Considerations

As noted in the introduction to this chapter, the assumption of an initial antithesis between child and society is central to both learning theory's cognitive theory's explanation of ontogenesis. An initial state of sovereign ignorance of the social is assumed and the concepts of 'tabula rasa' or 'egocentrism' are invoked to describe it. Moreover, if we assume an initially pre-social state, then a determinist thesis is a necessary interpretive framework since the child is not intrinsically pre-disposed to being social. Where the theories radically differ, however, is the manner in which this ignorance is overcome and the dichotomy resolved, one seeing ontogenesis as endogeneously determined, the other as exogeneously determined. However, in their research on the friendships of young children, we may isolate the following commonalities:

(i) Both have looked at friendship relations from the perspective of the individual, learning theorists, in terms

of behaviour emitted and/or received, cognitive theorists in terms of children's cognitions about relationships. However, neither have looked at how different relationships are established and maintained over time as is the case in say, a nursery.

(ii) Both theories are marked by a quest for a unitary dimension that functions as both cause and explanation of behaviour. For example, in social learning theory, the same inferential processes are operative in efficacy appraisal in mathematical tasks as in social interactions, e.g., perceived competence (Bandura, 1981). Similarly, in Piagetian theory, the same logico-mathematical operations underlie interactions in the interpersonal and impersonal sphere (e.g. Selman, 1980).

(iii) Both approaches have adopted an interpretive framework within which differences rather than continuities between children are sought, learning theory within a quantitative framework, cognitive theory within a qualitative framework. This is, of course, an outcome of the child/society dichotomy. The investigation of differences is especially salient in the research of cognitive theorists whom we have seen asserting a functional discontinuity between children's relationships with adults and with peers in the socialization process. Learning theorists, on the other hand, argue that prior learning experiences do have a determinative effect on future behaviour, hence family relations and peer relations are

not discontinuous (e.g. Bandura, 1981).

Walkerdine (1982) criticizes what she refers to as "certain basic psychological assumptions", i.e. that individual and context can be firmly distinguished:

"In psychology the problem is conceived in terms of the 'internalization' of social features, that is by relating the 'external' social dimension to the 'internal' individual dimension. . . . My position is that this approach, though useful up to a point, is radically unable to provide the breakthrough which is required." (page 130)

Scant attention has been paid to young children's social behaviours within their context of occurrence though the importance of considering social context in analyses of early relationships has been succinctly demonstrated (e.g. Trevarthen, 1979; Manning, 1980). Children do not engage in social behaviours in a void but within a mutually defined social context with particular individuals with whom they have particular relationships. As noted above, in an environment such as a nursery, children will be actively engaging in different relationships with different individuals over an extended period of time. Are these different relationships consistently and selectively maintained?

The topic of this research endeavour, 'Preschool Children Within Their Social Structure' reflects my wish in the course of this thesis to demonstrate that children actively and selectively establish a social structure

based on differential relationships that are consistent and stable. If children do organize their relationships thus, then they must be actively aware of their relationships with each other in order for this organization to occur and to be sustained. Garfinkel (1967) argues that our sense of our social world is interactively maintained. This is the view being adopted here. As Glick (1978) writes:

"The main problem of social life is not necessarily to emerge with a 'theory' of social actors. It is rather to maintain and sustain coherent courses of action which are related coherently to an interactive context." (page 5)

Elucidating a social context based on children's organization of their relationships is the task of this research endeavour.

CHAPTER 2: METHODOLOGY

I Subjects

Research was based on fourteen children, five girls and nine boys (including two sets of twins). All except one child were over four years old when data collection commenced. The youngest child was 3.7 years. Pseudonyms and dates of birth for each child are presented in Appendix 2. The nursery was staffed by a nursery teacher and her assistant. Children attended classes from 9.00 a.m. - 12.00 p.m. and were free to engage at will in the various activities the nursery provided. The only structured activity was 'story-time' for twenty minutes every day. Parental occupation ranged from SES class 1 to 4, though heavily weighted towards class 1.

Selection criterion for the sample was duration of attendance in the nursery. All the children had been in the nursery the previous year, with the exception of two who joined the nursery after the summer break. Because they were the same age as the other children, they were included in the sample. Younger children entering the nursery during data collection were not included since the result of their inclusion would have been a sample characterized by excessively different degrees of familiarity, not to mention a two-year age range. Both these factors necessarily need to be controlled for a study on relationships.

The data on which this research endeavour is based extends over a four-month period. By the time data collection commenced, the children had been together in the nursery for a minimum of five months. Degree of acquaintanceship would seem, on a purely intuitive level, to be essential to both methodological and theoretical considerations, i.e., our relationships with people we know well are quite different from those with whom we are less familiar. This is a neglected factor in research on early relationships. Many studies of the social behaviours of young children involve observations of dyadic interactions in pre-arranged settings without paying due attention to the circumstances of the encounter in considerations of results. Strangers are paired by virtue of common age or children from a class are randomly paired. (e.g. Rabinowitz et al, 1975; Eckerman and Whatley, 1977; Strain et al, 1977) This issue is discussed in greater detail in Chapter 7 (pages 271- 2).

However, research has clearly demonstrated that previous acquaintanceship does exercise an effect on the course of an ongoing interaction. Indeed, this is strikingly illustrated in McGrew's (1972) research demonstrating the distinctive social behaviours of 'newcomers' to a nursery. Gottman and Parkhurst (1980) observed differential relationships between dyads who were friends and dyads who were strangers in children ranging in age from 2.11 to 6.1 years, regardless of age of dyad (children were matched for age).

II Sampling Decisions

(a) Nature of task

In a review of sampling methods employed in observational research, Altmann (1974) writes:

"choice of selection criteria is best determined by the demands of the particular question" (p. 235)

The question upon which this thesis is based can be presented in a twofold manner for the purposes of explication:

- i) Research dealing with sociometric nominations of friendship preferences demonstrates that preschool children do have specific friendship preferences. There is, however, a dearth of research showing how this selectivity is operative in an environment that is shared for a considerable period of time. What happens? Do children have differential relationships that are consistent and stable, i.e., a social structure? This would seem to be a logical conclusion of the sociometric research. On the other hand, Piaget (and Piagetian theorists) contend that the young child is not capable of forming enduring relationships. As noted in Chapter 1, egocentrism precludes the possibility of true interpersonal contact.
- ii) If children do form a social structure based on differential relationships, how are these relationships established and maintained? How are differential relationships communicated?

These research questions can only be answered through a study of the social context within which a child interacts with his peers. Individual acts per se are not of intrinsic interest so much as the act within its context of occurrence, i.e., who initiated what type of act to whom and what type of response occurred from whom? Harré's (1977) following remark reflects the line of thought followed in deciding upon a particular methodological approach:

"In a structured entity the component parts derive their meaning from the other details to which they are internally related. A handshake is not the same action when embedded in a betting routine as when part of a greeting. The frequency of meeting someone is not a social item at all if detached from a particular social milieu from which it can gain significance as a meaningful feature of interaction." (p. 286)

(b) Resultant choice of sampling methods

A description of social context necessitates a record of the identity of the children who are interacting and what transpires in the course of these interactions. A record of each child's interactions with different peers also seemed essential. For this reason, a focal child was observed for a fixed period of twenty minutes. This method of sampling is referred to as event-sampling in the research literature and is appropriate for obtaining frequency of occurrence of particular behaviours (Altmann, 1974; Fassnacht, 1982).

Many observational studies of young children's interactions use time-sampling techniques in which children are observed for pre-selected intervals of a duration specified in seconds. For example, Jakibchuk and Smeriglio (1976) observed children for 55 fifteen-second intervals over a minimum of two days. A child's score on the various categories of behaviour was derived from the number of intervals in which an occurrence of the relevant behaviour was observed, within a range therefore of 0 to 55. Masters and Furman (1981) observed individual children for 3 six-second intervals at a time. They thus collected 180 intervals of observation for each child. However, there is a danger of getting 'inflated frequencies' in that frequencies could partially reflect whether or not an act 'over-lapped' an observation interval. Indeed, Fassnacht (1982) comments that "the result of a time-sampling study partly depends on the length of the standard interval" (p. 121).

An advantage of the time-sampling method is that one can feasibly include a large number of subjects in one's study. A disadvantage is that one necessarily loses social context since one is pragmatically confined by duration of interval to a small selection of grossly defined categories of behaviour. Altmann (1974) makes the following observation:

"In order to keep sampling time brief, the categories that are recorded should be easily and quickly distinguished. For this reason,

it is in general more suited to studies of non-social behaviour . . . or to situations in which social behaviours can be lumped into a few easily distinguished categories." (p. 259)

The above-cited studies used three broad categories of social behaviour. (Masters and Furman's categories are presented in Chapter 1, page 12). Others have employed Parten's (1932) categories of social participation, i.e. parallel, co-operative etc. (e.g. Jennings, 1975; Smith, 1978; Bakeman and Brownlee, 1980).

An observer loses 'inter-action' when acts received and acts initiated are sampled independently of each other. This occurred in both the Jakibchuk and Smeriglio and Master's and Furman's studies. As mentioned in Chapter 1, Masters and Furman acknowledge this problem, writing:

"A more complete description will require continued careful specifications of the acts, the actors, the recipients, and the concept of the interchange . . . it is essential that attention be given to the transactions of the participants in any social exchange rather than simply to the static or summary characteristics of each." (p. 349)

The research question being posed in this thesis obviously cannot be answered through data yielded from time-sampling techniques of observation. A study of social context necessarily demands data ^{obtained} ~~from~~ from extended periods of observation.

III Nature of recorded observations

During the observation period, the following data were recorded:

- a) activity area the child was in and the nature of his activity, e.g., having tea in the Wendy House.
- b) who the child was with.
- c) ongoing interactions between focal child and peers:

All conversations were recorded verbatim.

If the Target child was part of an interacting group, the whole interaction was recorded, e.g., a triad in a "car" going to "Hampstead". This was deemed essential to provide me with a record of social context, since I needed to know the child's actions within the context of mutual activity.

All gross motor nonverbal interactions were recorded such as exchanging objects, approaching, hitting, pushing, hugging etc.

- d) if the child was engaging in an activity alone this was also recorded as I couldn't tell beforehand whether or not an interaction based on the child's activity was going to occur, e.g. a child is painting alone, using black paint. Another approaches and comments:

"That's horrible! You're making black."

In this example, the meaning of the child's

comment is based on his peer's activity, i.e., it occurs within a context of a specific nature and its meaning is therefore bound within that context.

- e) in all cases, who initiated what type of behaviour and who responded with what type of behaviour was recorded.
- f) no child was observed more than once a day and observations were regulated such that data on each child was equally distributed over the four-month observation period.

In a study of social behaviours a decision has to be made to include some behaviours and to exclude others from one's records. Information is simultaneously lost and gained. This is a methodological problem that arises in any observational study of naturally occurring behaviours. The data in this study largely comprise the children's conversations. The role of children's conversations in their relationships has received little attention in the research literature though such data would seem to provide the opportunity for a fine grain analysis on how children communicate when they interact.

IV Methodological Tools

Initial attempts at recording observations by writing everything down proved unsuccessful simply because the children's rate of activity exceeded my rate of writing.

Thus an alternative method was sought. An attempt to collect data with a portable cassette recorder was abandoned. The resultant product often seemed to be a confluence of every activity in the nursery. Transcribing from the cassettes was especially time-consuming in view of the poor quality of data that was yielded even though the recordings were supplemented with written notes. A radio microphone, carried by the focal child, was considered but rejected as unsuitable because:

- i) it was too heavy and bulky for a small child to wear for extended periods; he could possibly injure himself if he fell.
- ii) such a device would almost certainly attract attention to the focal child, possibly from children with whom he didn't normally interact, and would therefore influence the course of ongoing interactions. Because I was interested in studying naturally occurring interactions, I was keen to maximize the distance between the children and my observational tools.

In view of the above problems attempts to collect data returned to paper and pencil. I learnt basic shorthand (Pitman, 1977) and 'practised' collecting data over an extended period until I was recording the children's interactions to a satisfactory standard.

V Observer Presence: "We just want you to write, not talk"
(comment from child in nursery)

By the time I was ready to collect data, children were fully accustomed to my presence. Obviously, this method requires an observer to remain as unobtrusive as possible and thus I was willing to comply with the above 'request'. However, it is impossible to claim that children are totally unaware of the presence of an outsider in their midst and the above 'request' testifies to this. It is possible, though, to minimize the effects of one's presence by assiduously avoiding any form of interpersonal contact with them, e.g., eye contact or talking to them. This was successfully achieved. In over 42 hours of data, only four references were made to my presence (including the one above) and it is the content of their speech that I've affected rather than their encounter per se. In one instance a child accidentally broke a screwdriver and attempted to hide it in front of me. Thus, it appears that children were used to my presence such that I did not influence or disrupt their interactions with each other.

VI Method of describing a social structure

The organization of children's relationships will be approached within the following analytic framework:

i) Interaction frequencies

A social structure based on differential relationships presupposes a selective distribution of interaction

frequencies. Chapter 3 deals with an analysis of these frequencies. An act between two children was counted as an interaction. If an act was directed towards, say, two individuals then an interaction between both individuals was counted. To illustrate with an example,

- (1) Linda-Karen: "I can jump, I can jump, I can jump a 100 metres."
- (2) Karen-Linda: "I bet you can't jump a 100 metres."
- (3) Derick (approaches) "Yes. I can."
-Karen & Linda:
- (4) Karen-Derick & Linda: "Me too."

This example would be 'counted' as follows:

- (1) 1 interaction: Linda and Karen
- (2) 1 interaction: Karen and Linda
- (3) 2 interactions: Derick and Karen
Derick and Linda
- (4) 2 interactions: Karen and Derick
Karen and Linda

Thus total interactions per dyad would yield:

- 3 interactions between Karen and Linda
- 2 interactions between Karen and Derick
- 1 interaction between Linda and Derick

ii) Categories

a) Introduction

The categories employed in this research endeavour are based on a semantic interpretation of acts. As discussed above, since I was interested in the way children actively and explicitly communicate differential

relationships, most of my data are recordings of their conversations. Coding was therefore necessarily interpretive, though any form of taxonomic classification of social behaviour is ultimately an interpretive activity. For example Grant (1969), in his classic study, describes facial expressions in terms of their muscular components. However, if we apply this classification to the behaviours of young children and label one act as a 'smile' and another as 'cry' or 'grimace', we are implicitly returning to a phenomenal rather than a noumenal realm. Attempts to objectify what is an intrinsically subjective occurrence are internally problematic, independent of the research topic itself.

Communication, and interpretation of communication, in social relationships, are barely addressed in research on young children. The inherently subjective nature of the activity has perhaps rendered it slightly 'untouchable'. However, trying to avoid this problem by singularly classifying all utterances under the taxon of 'vocalization' or 'conversation' or 'social interaction' is not a solution. Indeed, we surely have more experience, by virtue of daily existence, ⁱⁿ interpreting the semantic content of an act, ^{rather} than what is unilaterally 'reinforcing' to a class of several young children. Commenting on the dearth of conversational analyses in research on young children's relationships, Gottman and Parkhurst (1980) write:

"A . . . shortcoming of previous observational research in children's social interaction is

that it would be essentially impossible for any human to demonstrate high levels of social competence using the coding categories. That is to say, the very choice of the coding categories contains hidden limiting assumptions about what children's capabilities are. As an example, in one coding system of children's social behaviour (McGrew, 1972), only one category out of more than 100 categories, called 'vocalize', recognizes the fact that preschool children can speak. The data obtained from such coding systems would not be applied to the social behaviour of adults, and they place an implicit ceiling on the social competence children can display." (p. 200)

A brief consideration of the literature indicates the extent to which conversation is *classified* as a discrete entity, or type of social behaviour, to be functionally grouped with other social behaviours displayed by young children. As noted previously, Masters and Furman (1981) used a category of behaviour called "a priori neutral" which incorporated all "social behaviour not categorised as reinforcement or punishment. . . . This category included most instances of visual attention, conversation and associative play" (p. 345). Jakibchuk's and Smeriglio's (1976) category of "positive social behaviours" comprised the following: "verbalization, smiling and/or laughing, imitation, and other behaviours including giving (both tangible and symbolic) and physical contact signifying friendliness." (p. 840) Jennings' (1975) category dealing with the



content of play activities was based on a distinction between object and social activities, the latter subsuming "games, role playing, conversation, and social interaction" (p. 513). Smith (1978) placed all extended interactions in a category called 'Group' which incorporated a multiplicity of social behaviours: "the focal child has one or more other children who interact substantially with him or her in the nature of the activity, either visually, verbally, through exchanging objects, or in the organization of a game" (p. 519). Rubin and Maioni (1975) looked at play preference and its relationship to measures of popularity, egocentrism and classification skills. During the one minute observation period collected on consecutive days, all behaviours including interchanges between children, were coded according to play type (dramatic, constructive etc.) and correlations with the various measures were later investigated. Though this is an extremely brief overview of the literature, it does indicate the pervasiveness of the assumption that children's communicative abilities are extremely limited and hence do not merit individual attention in investigations of social development.

b) An approach towards analysis of communication

On the basis of a belief that an understanding of children's relationships required a consideration of the actual context within which they interacted, a categorisation scheme was constructed in which acts are semantically

classified. In the construction of this scheme, I was influenced by unsuccessful attempts to address my original thesis topic, "The relationship between creative play and social adjustment". Apart from experiencing great difficulty in delineating the definitive criteria which separates creative from non-creative play, I realized, through various attempts to construct an appropriate categorisation scheme, that children's relationships eluded description in terms of individual acts. Further, I noticed in the course of observations, that the children appeared to be communicating with each other to a degree that challenged traditional assumptions of egocentrism.

A social structure based on relationships, by definition, presupposes communication. Communication, in turn, implies an interest or involvement in what the other person is doing or saying. If children do selectively establish and maintain differential relationships that are consistent and stable over time, then they must be engaging in mutually meaningful interactions in order for these relationships to be maintained. 'Meaning' must be apprehended in the same way by the children. 'Meaning' was operationalized by use of the concept of 'theme'. A definition provided by a dictionary was sufficient for my purposes:

"a subject set or proposed for discussion"

(Chambers Twentieth Century Dictionary)

The use of theme as a basis of classification necessarily obliged me to code acts in relation to

preceding acts. The degree of thematic consonance inherent in any act is, by definition, predicated upon its semantic relation to a preceding act. Thematic consonance distinguishes a 'conversation' from what Piaget (e.g. 1926) refers to as a "collective monologue". It is the basis upon which we interact with each other and, indeed, upon which I am endeavouring to write at the present moment. In coding the children's acts, I therefore used what Shields (1978) refers to as "that classical analytic device, the native language speaker's intuition" (p. 321). Below is a broad outline of the classificatory framework employed. Further details will be provided in pertinent chapters.

A Theme (Chapter 4):

i) Social conduciveness of acts:

All acts were initially coded on the basis of whether or not they were conducive to continuing the nature of the ongoing interaction.

This category comprises two discrete mutually exclusive sub-categories.

ii) Thematic sub-categories:

Each act was further assigned a code dealing with the extent to which it developed the theme or topic of the preceding act. These sub-categories are also discrete and mutually exclusive.

B Content: Differential responsiveness:

i) Exclusion (reject person)/Reject idea (Chapter 5):

'Exclusion' subsumes acts involving rejection of an individual such as "You can't come in."

'Reject idea', on the other hand, subsumes acts involving a rejection of what a peer is doing such as "Don't put that there."

ii) Inclusion (Chapter 6):

'Inclusion' subsumes acts that reflect a personal involvement or commitment to the other person and implicitly create expectations of a continued interaction such as "Will you play with me?"

iii) Pronominal references are investigated in Chapters 5 and 6 in terms of their distribution across the children's relationships.

'Inclusion' and 'exclusion' are discrete and mutually exclusive as are their respective sub-categories. I expected the distribution of 'exclusion' and 'inclusion' to conform to the selective distribution of interaction frequencies I hoped to yield in analysis conducted in Chapter 3, such that 'exclusion' was more likely to occur between children who did not interact frequently and, conversely, 'inclusion' among children who did interact frequently. In this way, I theorized, children would maintain the differential relationships upon which their social structure was based.

Inter-coder reliability:

Reliability tests were undertaken by requesting a coder to categorize interactions from the transcripts. Reliability tests were undertaken for all the sub-categories employed and they will be presented in the pertinent chapters. Mean reliability coefficients for the superordinate categories are presented below:

Social conduciveness	1.00
Thematic sub-categories	.87
Exclusion	.94
Reject idea	.84
Inclusion	.87

These were calculated by dividing the total number of agreements (A) and disagreements (D) into the total number of agreements. $\left(\frac{\sum A}{\sum A + \sum D}\right)$

Problems:

The major difficulty I experienced with my data was one of over-categorisation. This can only be attributed to naive zeal. Insofar as the thematic sub-categories are concerned, I over-categorised to a degree that was excessive for the purposes of my study, i.e. to see whether or not children are communicating within a mutually meaningful framework. My 'excuse' is that I developed an interest in children's conversations (i.e. how they develop and maintain them) whilst I was collecting data and the resultant categorisation scheme reflects this interest. The 'inclusion' and 'exclusion' sub-categories were over-categorised to a degree that rendered statistical analyses problematic. Some

children engaged frequently in particular behaviours subsumed within particular sub-categories whilst others didn't. Thus I 'collapsed' them (e.g., statements of friendship would be combined with play invitations on the basis that they both function as 'inclusive' behaviours) to render possible statistical analyses that incorporated the activities of all the children in the sample.

VII Analysis of data

The data were categorised on coding forms in preparation for SPSS analyses. Because I was trying to illustrate a social context (based on differential responsiveness) in terms of particular behaviours, I did many χ^2 analyses to test for the significance of the distribution of these behaviours across different groups of children. Children were collapsed into friendship groups on the basis of analyses of their interaction frequencies and subsequent analyses were conducted using the behavioural classification as the independent variable in order to see if the behaviours were being used differently towards different groups of children. The validity of this procedure was checked with the statistical advice clinic, University of Edinburgh. Data analyses are based on 28 hours of observation (2 hours/child). Though each child was observed for 3 hours coding proved to be extremely time-consuming and 2 hours provided an abundance of data. All statistical tests undertaken were two-tailed.

CHAPTER 3: STRUCTURE

"An individual is usually defined as an indivisible, self-contained unit, with a separate, independent existence of its own. But individuals in this absolute sense are nowhere found in Nature or society, just as nowhere we find absolute wholes. Instead of separateness and independence, there is cooperation and interdependence."

(Koestler, 1975; page 67)

The child is part of mankind, part of a family, part of a peer group. He moves within groups, groups that are functionally autonomous and distinct from one another yet he is a definitive part of each. Each group may be defined by its individual members and their inter-relationships, the interactive result their group identity. Functional (e.g. family versus peer group) and personality (members comprising it) characteristics combine to produce a specific group structure. From these considerations it follows that

(a) a social structure should be characterized by communication between members (this was mentioned in Chapter 2, page 53). Indeed, communication is the criterial basis of McGrew's (1972) definition of social structure, i.e.,

"the consistent, nonrandom channeling of socially communicative behaviour patterns between types of individuals in a group"

(page 147)

(b) a social structure should be characterized by inter-dependent relationships. This is implicit in Piaget's (1968) distinction between "structures" and "aggregates", "the former being wholes, the latter composites formed of elements that are independent of the complexes into which they enter" (page 7). Riegel (1978) asserts that "All reality lies in the dialogical - or rather in the dialectical - process" (page 55). Therefore, each individual must be seen in the context of "constitutive relationism" wherein every phenomenon is intrinsically determined by its relations with all other phenomena.

The communication of inter-dependent relationships is the subject matter of this thesis. In Chapter 1, it was argued that research on young children's relationships is dominated by a focus on the individual child to the exclusion of context and that this approach stems from the premise that the young child is not initially social, hence a focus on how he becomes 'social'. However, the individual thinker or actor reflects a theoretical/methodological approach rather than an experiential reality. From the moment of birth, the interpersonal is a constant fact of the child's existence. Bruner (1968) prefaces his work on infant cognitive development as follows:

"I take it as a working premise that growth cannot be understood without reference to human culture." (page 2)

Trevarthen (e.g. 1982) espouses a similar view. Donaldson (1978) writes that "personal relations appear to form the

matrix within which learning . . . takes place" (page 88). Personal relations may provide the matrix within which children learn about each other and form different relationships on the basis of this knowledge. Labelling an individual child as sociable, aggressive or dependent will, therefore, not provide us with a description or an understanding of his relationships with peers. This argument is central to this thesis.

In the research literature, one can identify three well-established structural approaches to the social relationships of preschool children. They are as follows:

1. Dominance Theory
2. Attention Structure Theory
3. Sociometric Theory

These three approaches will be discussed below.

1. Dominance Theory

Dominance theory looks at the organisation within the group of power relationships based on aggressive encounters or property disputes. Theoretically, a group such as a nursery class, can be hierarchically ordered along a dimension based on dominance, with the top child being the most successful in such disputes, i.e., the most dominant, and the bottom child the least successful, i.e., the least dominant. This hierarchy is theorized to be a necessary pre-condition for the peaceful co-existence of group members, as repeated aggressive episodes have a

disruptive or 'dispersive' effect on the group. Therefore, a dominance hierarchy should have predictive validity:

"group dominance hierarchy formalizes dyadic roles during periods of aggressive conflict, and thus serves as a regulatory system that minimizes dispersive agonistic exchanges between group members."

(Strayer, 1980; page 167)

A dominance hierarchy thus expresses the expected outcomes of dyadic encounters of an aggressive nature for a given group. Dominance theorists argue that it is therein expressive of the relationships between the individuals comprising the group along the dimension of dominance:

"The concept of dominance refers to the relationship between individuals, not to the amount of aggressive behaviour that they show."

(Hinde, 1974; page 342)

The degree of linearity characterizing this hierarchy will necessarily be determined by the relationships between the individuals from which it is derived. In a purely linear hierarchy, for example, if A dominates B, and B dominates C, then A dominates C. However, if the dominance relationships do not conform to a linear model, then this syllogism fails to hold, and we are presented with a dominance hierarchy that is structurally intransitive: A dominates B, B dominates C, and C dominates A. Given that preschool groups are not structurally identical, i.e., that the structure of a group will vary as a function of

the personalities and inter-relationships of the members, it is inevitable that the degree of linearity present in hierarchies will vary across groups. Indeed, in the research literature reports of hierarchies characterized by varying degrees of linearity can be found (e.g., Abramovitch, 1980; Sluckin and Smith, 1977; McGrew, 1969).

In asserting that a dominance hierarchy reflects structural organization within the group of a certain kind of interactive episode, the question of the children's awareness of this structure necessarily arises. Edelman and Omark et al, Omark (1973), and / 1975) devised a sociometric test that required children to rate themselves and their peers on relative 'toughness'. The concept of 'toughness' was chosen because definitions provided by children corresponded to primatologists' definitive criteria of dominance. Children were presented with pictures of peers and asked "Who is the toughest?" If two children independently agreed that one was tougher than the other, then they constituted a "dyad of established dominance" (Edelman and Omark, 1973). In contrast to school-aged children, nursery school children did not show an awareness of dominance relationships, tending instead to overrate themselves. Edelman and Omark argue that their results support the Piagetian thesis of egocentrism and proffer the further argument that the inferential abilities required for rank ordering a dominance hierarchy are functionally equivalent

to those required for Piagetian seriation tasks. Success in both tasks requires an awareness of the concept of transitivity:

"Being able to make finer and finer distinctions between others and between the self and others is, of course, one of the bases upon which hierarchical social relationships can develop. It is also a necessary part of the cognitive stages involving seriation and transitivity."

(Omark, 1980; page 234)

In an investigation of this hypothesis, Omark and Edelman (1976) presented children (kindergarten to 3rd grade) with two tests of "cognitive hierarchization". Children were required to order eight sticks by length and were also presented with photographs of eight peers which they were required to rank on the basis of relative toughness. An awareness of dominance relationships was evident after the kindergarten level. Omark and Edelman argue that younger children are too egocentric to give precedence to others within a hierarchy. They also claim a developmental parallel between performance on the hierarchy test and the seriation task.

The above research stimulated other investigations. Strayer, Strayer and Chapeskie (1980) found their sample of preschool children to be unsuccessful at assessing relative toughness within the dyad. Furthermore, a child's position in the dominance hierarchy did not predict how accurately he perceived his own dominance status. Children were more successful in making judgements about others than

about themselves, lower status children showing a significantly greater degree of inaccuracy. Strayer et al consider the possibility that these results may reflect the constraints inherent in cognitive egocentrism, therein rendering it difficult for children to make relative judgements that involve the self.

Assertions that egocentrism constrains the perception or identification of dominance relations necessarily presuppose that children do actually have such relations. As stated above, dominance theorists hold that a dominance hierarchy is expressive of relationships of a particular nature between individuals comprising a group, yet dominance is a construct that is by definition derived from the outcome of a relationship of a particular nature. For example, Rowell (1974) writes:

"Dominance is useful as a shorthand term to indicate that the outcome of an agonistic or competitive interaction is predictable at some level of certainty." (page 151)

Moreover, it is an inherently 'asymmetrical' construct in that A's dominance is defined by B's subordination.

'Dominance' does not gauge psychological factors inhering in an encounter, i.e. we know nothing about the individuals within a group (apart from their relative degrees of success in agonistic episodes) nor the inter-relationships, negotiations, etc., that presumably culminated in the resultant structure. However, it is these factors that may determine the outcome of an encounter falling under

the taxon, "dominance". Yet in asking children about the dominance relations in their class, we are necessarily dealing with the above-mentioned factors and thereby treating dominance as a construct with psychological, as opposed to logical validity. This assumption is implicit otherwise theorists in this area would not assert a necessary relation between 'perceived' and 'actual' dominance relations and attribute its absence to egocentrism.

This theoretical ambiguity that seems to characterize the concept of dominance may account for the inconclusive nature of investigations into 'perceived' dominance relations. Sluckin and Smith (1977) asked preschool-aged children to select the 'strongest' (British equivalent of 'toughest') from a set of photographs of peers. They found that children's responses corresponded more to initiations of aggressive acts than the outcomes of acts from which the hierarchy was derived. Sluckin and Smith also speculated that their results may reflect an identity between a child's perception of dominance relationships and his ability to make transitive inferences:

"The present findings suggest that the children's social experience in the preschool is also providing a suitable experiential matrix for the development of transitive inference procedures." (page 922)

Pickert and Wall (1981) investigated further Sluckin and Smith's finding that young children's perceptions of dominance relations corresponded more to the initiation of

the relevant encounter than its outcome. They suggest a distinction between "getting one's own way" - i.e., successful outcome of confrontation - and "toughness" - i.e., a characteristic of individuals who make dominance attempts. Children (aged $9\frac{1}{2}$ years) were asked to rate peers according to the above two criteria. Although children did differentiate between the two terms, overlapping hierarchies resulted. The same children tended to occupy the upper and lower echelons of both hierarchies. Like Sluckin and Smith (1977), they found that children overranked themselves on 'toughness' (i.e. 'strongest'). However, on "own way" judgements, high groups underranked themselves, whereas low groups overranked themselves. Pickert and Wall suggested differential perceptions of dominance based on the terms employed:

"In their descriptions, the children interpreted 'own way' as success in controlling others through varied strategies. In contrast, 'toughness' was interpreted primarily as an aggressive characteristic of behaviour. Thus the children's definitions of dominance did seem to vary according to the terms." (page 79)

They go on to suggest that the overlapping hierarchies, which contradicted the distinctions that the children did make between the two terms, may reflect the strategic significance of aggressive behaviours in the interactions of children:

"The overlap in hierarchies may have occurred with this age group for whom aggressive behaviours are a prevalent strategy for obtaining one's own way." (page 80)

The above remark does not receive any empirical verification. However, these results do reflect the difficulties inherent in an approach that assumes (a) that a direct relationship should occur between a child's definition of a term and his operationalization of that term to peers with whom he probably has different types of relationships, and (b) that a direct relationship should occur between a dimension defined by an experimenter and children's perceptions of their peers when presented with this dimension, i.e., the former's definition should correspond to the latter's experience.

The above research rests on the assumption that 'dominance structure' is not just a heuristic tool but actually represents an organization of relationships that is created by the children and is, moreover, intrinsically meaningful to them and not just to the experimenter. This means that the child should perceive, say, 'toughness' in a manner that is both structurally and functionally equivalent to the way the researcher perceives 'dominance'. The ontogenetic significance of the hierarchy is assumed. This is implicit in the researcher's tendency to attribute preschool children's performance in hierarchization to egocentrism.

Aggressive behaviours occur within a social context. Behaviours that preceded and followed the agonistic encounter are not considered. Significance is only attached to the dominance encounter itself, and the point

at which they are extracted from their context of occurrence is decided by the experimenter. Thus, the functional dichotomy between affiliative and aggressive behaviours, and the salience attached to the latter as a regulatory factor in group relations, is assumed. Hierarchies merely reflect organization. However the relations existing within that organization may go beyond the assumption of dominance relations to include personality and affiliative constraints.

Frankel and Arbel (1980) indeed, suggest that a hierarchical arrangement may be an artefact of methodology rather than reflecting a regulative property of social organization intrinsic to the group itself. They adopted a sociometric measure of dominance based on the number and status of individuals for whom the child is a winner or loser across various agonistic encounters (e.g. hitting, object struggles). A centrality score was thus derived. Frankel and Arbel also constructed a 'traditional' hierarchical model of dominance relations based on amounts of wins and losses. They found that non-agonistic measures (e.g. imitation, initiation of prosocial interactions) correlated with the centrality model but not with the hierarchical model. Thus, hierarchic and non-hierarchic models of dominance may be gauging different properties of social organization. Indeed, Vaughn and Waters (1980) found the dominance hierarchy within their sample of preschool children to be unrelated to measures of sociometric preference.

Such results suggest that undue attention has been paid to the functional significance of hierarchical structures and asymmetrical relationships. Indeed, within primate research from which the concept of dominance was taken, the structure of affiliative interactions has been found to be inversely related to that of aggressive interactions, i.e., the latter tends towards asymmetry, the former towards symmetry (Pitcairn, 1976). Moreover, dominance relations are not necessarily hierarchically arranged (Rowell, 1974). The relationship between aggressive and affiliative behaviours in preschool groups has barely been addressed; however research does indicate that a hierarchical structure provides an inadequate descriptive model of group interactions in this age group. In an investigation of the differential structures characterizing affiliative and aggressive interactions in preschool groups, Strayer (1980) reports:

"The comparatively low level of asymmetry in cohesive behaviours indicates that a hierarchical model cannot adequately represent the organization of affiliative relationships within the preschool groups." (page 182)

Indeed, aggressive encounters are extremely infrequent compared to affiliative ones. For example, in the above-mentioned study, Strayer (1980) notes that in one group over 1,000 affiliative gestures were recorded and less than 200 agonistic episodes over the same time period. Theoretically, one can attribute the low frequency of

intra-group aggression to the regulative function of the dominance hierarchy, i.e., it minimizes dispersive encounters and thereby serves a cohesive function. However, such premises can lead to tautological rationalizations (it does not happen because there is a dominance hierarchy to prevent it from happening) and post hoc validation of a concept is in any event dubious.

Ontogenetic significance is assumed on the basis of assumptions of phylogenetic continuity. Comparisons between primate dominance hierarchies and those of young children recur in the research literature. For example, in a study of low-ranking ('omega') children in school-aged groups, Ginsburg, Wauson and Easley (1983) write:

"Imanishi¹ noted that in the Japanese monkey (*macaca fuscata*), the lowest ranking troop members rarely engaged in social interaction with other troop members, including aggression . . . Investigations of preschool children and adolescent groups have yielded similar results; omega youths were rarely targets of aggression by higher ranking peers." (page 151)

¹Imanishi, K., Social behavior in Japanese monkey Macaca Fuscata. Psychologica, 1957, 1, 47-54.

Similarly, Omark (1980) discusses within a phylogenetic framework the tendency of young children to overrate their status:

"From an evolutionary perspective, where man, the primates, and perhaps other species, are

seen as group-dwelling species and where dominance relationships are also seen as serving a stabilizing function, the above set of findings may begin to make sense. The developing organisms act in such a way that their peer group is momentarily stable; they 'learn' a position within the group. At the same time they are moving towards adulthood, reproductive age, and the probable necessity of leading the group. Hence, it seems important that the child may cognitively be viewing the self as being more than and, in part, different from what is expressed behaviourally." (pages 249-250)

Yet, even within primate research literature, the regulative function of a dominance hierarchy is a debated issue. In contrast to Omark's argument above, Rowell (1974) asserts:

"This is commonly held to be the main function of hierarchies, yet overall associations indicate the opposite: hierarchies are found especially prominent in association with high levels of aggression in stressful conditions, wherever intraspecific comparisons are available (Lindberg, 1972; Rowell, 1967; Bernstein, 1966; Plotnik et al, 1968). . . learning processes leading to hierarchy formation will be favoured in conditions of frequent conflict. The assumption that hierarchy then reduces conflict probably stems from the common observation that if several stranger monkeys are thrown together initial violent fighting diminishes and a hierarchy emerges (Bernstein and Mason, 1963). We would expect from our

analysis that fighting would produce a hierarchy as subordinates succumb to the stress; what is lacking is evidence that establishment of a hierarchy itself provides feedback to reduce aggression." (page 145)

Dominance is theorized to regulate access to resources such as food or partners in primate groups. Environmental contingencies will therein directly affect organizational properties underlying the hierarchy of a given group. Intraspecific differences in the hierarchies of primates in the wild compared to those in captivity have been noted in the research literature (e.g. Hinde, 1974). Lea (1984) argues that the conditions under which primates are observed (such as captivity or providing a single focused food source) can in themselves induce the formation of a hierarchy in animals not normally displaying one; hence he asserts that "dominance hierarchy is too easily assumed to be ubiquitous" (page 63). Thus assumptions of a functional identity between preschool and primate groups on the basis of morphological similarities are not justified given the radically different environmental contingencies facing the preschool child in a group compared to those of a hamadryas baboon, for example. Indeed, research does suggest that expressions of 'dominance' may encompass functionally different behaviours in preschool groups though it has been treated as a unitary construct. Vaughn and Waters (1980) report that aggression with intent to harm (teasing, taunting, fights that are not over objects or places) and

object struggles (fights over objects or places) both conformed to hierarchical models, yet the correlation between the two measures was not significant. It would thus appear that research into the ontogenetic significance of dominance structures in young children's groups is necessary before we can posit phylogenetic continuity.

2. Attention Structure Theory

Attention structure theory is based on the premise that the amount of attention, both given and received, reflects the organization of status relationships within a given group. Barkow (1976) writes that attention structure is a structure of communication that is a function of the group's prevailing social situation:

"Attention structure is a communication concept . . . a way of understanding social organization in terms of the structure of communication rather than solely in terms of its content or behavioural effects."

(his emphasis, page 203)

Within any group a hierarchical organization of attention is theorized to prevail, high-ranking individuals receiving more attention, lower-ranking individuals receiving less. Chance and Jolly (1970) assert that uniform direction of attention can serve a cohesive function:

"predominant attention to a single individual can, by acting as a common focus of attention, provide a means whereby a number of people cohere."

Theoretically, attentional distribution within a group will be structured on a centripetal basis, thus enabling a group to coalesce more efficiently when in danger.

Like dominance structure theory, attention structure theory is a relational concept, taken from primate literature and applied to humans. Omark and Edelman (1976) argue that the presence of an attention structure within a group presumes awareness of that group's dominance relations:

"Before attention can be directed upward in a hierarchy it has to be directed toward others; and, for attention structures to exist as a total group phenomenon, this directed perception would have to occur in both sexes. That is to say that a hierarchy, or some form of structuring of individual relationships . . . , is probably a necessary characteristic of centripetally organized groups. Once a group has been recognized, then differential perceptions within the group can occur." (page 137)

Based on Chance's (1967) argument that dominance was determined more by the focus of attention than by the outcome of aggressive episodes, Omark and Edelman (1976) hypothesized that the child at the top of the hierarchy would be watched more carefully than the child at the bottom. Thus there would be more agreement between children on who was at the top of the hierarchy than on who was at the bottom. Their hypothesis was confirmed in young school children (1st to 3rd grades). Moreover, children could reason better with hypothetical premises concerning children at the top than at the bottom.

Research in this area involving preschool-aged groups has tended to investigate behavioural correlates of attention structures, dominance in particular. Hold (1976) investigated the relationship between rank-specific behaviours associated with leadership styles⁽¹⁾. She found a direct relationship between being centre of attention and leadership style:

"he is the one who is asked, shown, told, obeyed, imitated, who gets most presents and is well-liked. His most characteristic activities are initiation and protection as well as arbitration. He does a lot of organizing and shows aggressive behaviour too, but these activities are more characteristic of peers following him in the hierarchy than of himself." (page 193)

Boys in the upper-middle section of the attention structure engaged more frequently in aggressive behaviour against children of adjacent status and in more organizing behaviours. Middle-ranking children sought reassurance often, imitated and showed friendly and anxious behaviour towards higher-ranking individuals. Lower-ranking children are characterized by lower interaction and activity levels.

Abramovitch (1976) found dominance relationships and proxemic behaviours to be related to attention structures.

(1) Hold's leadership categories are: Initiator, Organizer, Aggressor, Protector and Arbitrator, Group Representative, i.e. the child making the first contact with children of another group.

Dominant children had priority of access to toys, were most looked at and tended to have subordinates as close neighbours. Elsewhere, Abramovitch (1980) reports findings indicating that attention is related to dominance, popularity and imitation. Vaughn and Waters (1980) found that attention structure was related to sociometric rank but not to aggression.

A difficulty with the above research is that the meaning of an attention structure has not been clarified. A structure has been identified but not its underlying function. Thus it is difficult to interpret or explain its co-relationships with other behaviours or measures. Indeed, researchers' explanations of their findings often seem particularly vague:

"The correlational data suggest, instead, that attention structure . . . and the sociometric data . . . measure much the same thing . . . and that hazing and specific hostility⁽¹⁾ measures something different . . . The correlations . . . reveal something about the relationships among the measures, but they are not very descriptive of the relationships between a given child's rank on a measure and his/her behaviour toward other children."
(Vaughn and Waters, 1980; page 371, my emphases.)

Abramovitch (1980) writes about her results in a similarly vague manner:

(1) Vaughn's and Waters' aggression categories.

"The fact that attention and status seem to be correlated in some groups and possibly not in others may mean that this is a somewhat variable phenomenon." (page 389, my emphasis)

The functional significance of an attention structure within a group of children is not clear. As noted in the consideration of dominance theory, there is a tendency to take concepts derived from primate research with assumptions of phylogenetic continuity prior to investigating the ontogenetic significance of the concept. Thus most studies tend to investigate attention structure in relationship to dominance, though dominance relations are just one aspect of social behaviour within the social network of a group of children. Omark and Edelman (1976) assert the functional significance of a centripetal organization of children's groups, based on primate research:

"If developing a hierarchy is a basic theme of juveniles in centripetal primate societies, we might also expect that learning dominance relations would be important for human children as well Because human growth is similar to that of other primates, the expectation is that it is adaptive for children . . . to have a coherent view of the dominance relations in their groups since the chance of their becoming adults is increased by the ability to anticipate and avoid potentially damaging fights among themselves." (page 122)

However, not all groups are characterized by a centripetal organization of attention. Pitcairn (1976) noted that

species showing a low level of intra-group aggression (angurs, patas, vervets) have a high escape motivation and thus distribution of attention is centrifugally structured. On the other hand, species showing a higher level of intra-group aggression (macaques and baboons) have a centripetal structure of attention.

Assumptions of a functional and structural identity between attention structures characterizing primate groups and young children ignore the importance of environmental contingencies (e.g. wild vs. captivity vs. nursery) and intra-group relationships in determining the structure of attention. Abramovitch (1980) reports that dominance and attention were not found to be "interchangeable" in her study, and thus asserts:

"there is little evidence to support Chance's notion that attention is the basis of dominance."

(page 395)

However, her findings on the relationship between dominance and attention in young children does not in itself constitute a refutation of the relationship between dominance and attention in primate groups. Abramovitch (1980), Hold (1976), and Vaughn and Waters (1980) report correlations between attention and popularity, imitation and sociometric status. These findings in themselves stress the importance of examining the function of a structure such as attention within the context of intra-group relationships. Ontogenetic significance must be established before we can assert phylogenetic significance.

3. Sociometric Theory

Like dominance and attention structure theories, sociometric theory involves ranking a group, such as a class, along a pre-selected dimension. Hallinan (1981) defines sociometry as "the measurement of social relations; it is a technique for collecting data about interpersonal choices" (page 9). 'Interpersonal choices' are usually gauged by means of verbal reports from group members. Children are asked questions concerning friendship preferences such as "Who do you like?", "Who don't you like?", "Who is your best friend", "Who do you like to sit next to?", "Who do you like to play with?", etc. The score derived for each child constitutes his sociometric status. Friendliness is defined as number of friendship choices made, popularity and/or peer acceptance as the number of choices received. Thus, a researcher may hierarchically arrange a group of children along the dimensions of friendliness, popularity or acceptance. Moreno (1953) coined the terms "sociometric star", "neglectee" and "social isolate" to characterize those at polar ends of the hierarchy. The "sociometric star" is the recipient of many choices, the "neglectee" and "social isolate" of few and no choices respectively. Hartup (1978) notes that these structures tend to be stable and are apparent in groups of young children:

"Social hierarchies can be observed in children's societies, even when the individual members are 2-, 3- and 4-year old children. Sociometric scores (i.e. indices of social

status or popularity) are somewhat less stable in groups of nursery school children than in groups of older children although considerable stability exists even in the choices of very young children." (page 146)

A large amount of research in this area has involved investigations of the correlates of high and low sociometric status and the implications of these correlations.

"Status is viewed primarily as an indicator of a child's position within a specific group; explanations for the child's status are sought primarily in terms of the child's behaviour in the group." (Berndt, 1983; page 447)

Marshall and McCandless (1957a) reported a positive correlation between a child's friendly social interactions and his sociometric status. In a later study (1957b), they found a correlation between emotional dependency on adults and low sociometric status. McCandless, Bilous and Bennet (1961) found emotional dependency negatively correlated with frequency of peer participation and sociometric status (based on popularity ratings of children by their teachers). Hartup, Glazer and Charlesworth (1967) looked at the relationships between social acceptance, social rejection (inverse of social acceptance, i.e., frequency of negative choices received from peers), and type of social reinforcement dispensed in preschool children. Positive social reinforcement subsumed behaviours such as giving attention, approval or affection, indicating acceptance, imitating and so forth. Behaviours such as aggression, ignoring,

insulting, refusing to share or cooperate, were classified as negative social reinforcement. Dispensing positive social reinforcement was positively correlated with acceptance, whereas dispensing negative reinforcement correlated with social rejection. 'Accepted' peers also received more positive reinforcement from peers. Gottman, Gonso, and Rasmussen (1975) also noted that popular children received more positive reinforcement. Rubin and Daniels-Beirness (1983) found that preschool-aged popular children engage in more cooperative and prosocial behaviours than their less popular peers.

The implications of such studies cannot be extended beyond acknowledging the occurrence of certain correlations. Piaget (1968) criticizes sociometric methods for their tendency to describe social structures in terms of observable patterns of behaviour which are regarded as a sufficient explanation of the structure itself and are derived from a statistically based methodology "whereby relations are, no doubt, quantified, but not in any sense explained" (page 101). Frequency of emission of particular types of behaviours may distinguish the accepted from the rejected child but they tell us nothing about the children's friendship patterns and the reasons underlying their acceptance or rejection. Moore (1964) succinctly discusses these problems that are, indeed, inherent in correlational studies of this nature:

"To know that two variables are correlated with each other does not, unfortunately, tell us all

we might like to know about the relationship between them. We do not, for instance, know which of the variables is the 'cause' of the other or if, in fact, some other factors are causing both. To know that popular children perform a preponderance of friendly behaviours is not to say that their friendliness is the 'cause' of their popularity. It is just as reasonable to hypothesize that being well-liked inspires a child to perform friendly behaviours as it is to hypothesize that performing these behaviours causes the child to be well-liked." (page 287)

Correlations between sociometric status and cognitive functioning have also been investigated. Rubin and Maioni (1975) looked at the relationship between classification skills, egocentrism, popularity and play preference in preschool children. They found a significant negative correlation between functional (repetitive) play and popularity. In contrast, significant positive correlations were found between popularity and dramatic play, empathic role-taking and spatial egocentrism. Rubin (1972) earlier reported a relationship between popularity and the ability to take the other person's point of view. Rardin and Moan (1971) have reported positive correlations between popularity and classification and seriation skills. Deutsch (1974) found communicative skill related to her observational measure of popularity but not to sociometric status.

Jennings (1975) found sociometric status to be positively correlated with her measures of social

knowledge (e.g. role taking, moral judgement) but not with her observational measures of social orientation. However, interpreting the 'meaning' underlying the relationship between sociometric status and certain cognitive skills is no less problematic than a consideration of its behavioural correlates. Jennings theorizes that her findings may indicate a "link between the effectiveness of social functioning and social knowledge" (page 518), however the nature of this link obviously requires further research. On the other hand, Renshaw and Asher (1983) compared popular and unpopular children's responses to hypothetical social situations and concluded that "social knowledge differences between high- and low-status children are subtle rather than glaring" (page 370). The necessarily inconclusive nature of this type of research is indeed acknowledged by Rubin (1972) in his study of the relationship between popularity and communicative skills:

"The results indicate that the ability to take another person's point of view may play a causal role in the child's attaining popular status among his peers during early school years. However, by Grades 4 and 6, variables other than egocentrism may determine the popularity of the child. Although a cause-effect relationship has been postulated, the exact nature of the relationship must remain uncertain until other data are gathered." (page 364)

Some researchers have proposed intervention programs designed to increase the child's sociometric status.

Gottman, Gonso and Schuler (1976) designed a training program involving modeling and coaching. Two 8-year old children, of low sociometric status, were exposed to a videotape of a girl entering a group of peers. The videotape was discussed and the subject role-played situations in which she was a new child in the class and wanted to make friends. After this, communication training was given to teach the child to consider the listener's perspective in interactions. The two coached children received higher ratings from peers than the two control children on sociometric tests administered upon completion of the program. The results are not clear: one of the children interacted more with popular children, the other interacted more with 'low sociometric status' children (9 - 10 years old).

Children with low sociometric status were verbally instructed in social skills by a 'coach' (the experimenter), participated in a play session with a peer of higher sociometric status, and then discussed the play session with their 'coach'. Sociometric scores were based on peer preference nominations for play, work and best friends. A child's sociometric score was significantly increased for play, there was a small but non-significant increase for best friends, but no change occurred in a child's status for the work category.

Implicit in this research that defines types of children in terms of their high or low sociometric status are two assumptions:

- (i) The assumption that friendship, acceptance or popularity constitute unidimensional concepts.

This assumption implies that children can be defined in terms of uniform patterns of behaviour manifest in varying degrees by a group of which they are members. This attitude is reflected in intervention programs of the type discussed above, which assume that a low sociometric status indicates inadequate social skills and that successful amelioration of this inadequacy is reflected in an increased sociometric status. In positing a unidimensional concept, it is possible to assert a constant normative standard of behaviour which distinguishes the accepted from the unaccepted. Thus Oden and Asher (1977) in the above-mentioned study observed popular children at play in addition to their experimental pairs:

"In order to learn how popular children would interact in the same play situation as the low accepted children, the highest rated child of the same sex as the isolated children was selected to be observed while playing a game with the second highest-rated child for one play session." (page 498)

The friendliness (i.e. frequent emission of positive behaviours) of popular children is presumed to result in the formation of relationships whereas the absence of friendliness in unpopular children is presumed to constrain the formation of relationships.

(ii) The second assumption implicit in this approach is that of homogeneity, i.e., that popular and unpopular children constitute two distinct homogenous groups.

The two groups can be differentiated from each other by frequency of emission of particular types of behaviour such as friendliness, for example. Oden and Asher (1977) employed an observation scheme that measured frequency of emission of peer-oriented behaviours, task-oriented behaviours, uncooperative/rejecting behaviours, and behaviours in response to outside noise and distraction. They looked neither at the response to these behaviours, nor at their contextual distribution across the observation session. In noting that the experimental children were not selected significantly more frequently as best friends by their peers after the session than before, Oden and Asher conjecture: "friendship may require additional social skills not included in the coaching." (page 504) However, the distinction between the popular and unpopular cannot be quantitatively defined. Oden and Asher encountered this situation when comparing the two groups:

"The popular children did not behave very differently from isolated children when comparing the latter's pre-intervention play session data with data from the former one's play session." (page 505, my emphasis)

In assigning children to broad categories, individual differences both in play and relational styles become blurred. Assumptions of homogeneity are challenged by

research demonstrating that the unpopular group may comprise children who are rejected (disliked) and those who are neglected (neither liked nor disliked). The former tend to engage in disruptive social behaviours whereas the latter tend to be shy (Dodge et al, 1983). In a longitudinal study, Coie and Dodge (1983) found that neglected children are more likely to move towards an average or popular sociometric status than rejected children. Maxwell's (1983) findings further challenge assumptions of homogeneity. He found that whilst only well-adjusted children demonstrated 'reciprocated best friendship patterns', both difficult and well-adjusted children in his sample displayed unreciprocated and pluralistic (no preference for a particular peer) friendship patterns. What distinguished the difficult from the well-adjusted was the way in which interactions were conducted. Difficult children who had unreciprocated best friends tended to engage in behaviours characterized by "bland, acquiescent friendliness" (page 149) whereas well-adjusted children attempted to develop a reciprocal relationship by engaging in prosocial behaviours as well as behaviours encouraging social play involvement. Well-adjusted and difficult children in the pluralistic category of friendship also differed. The former were found to be socially active whereas the latter displayed fewer social acts, a lesser degree of social involvement and fewer regular friends.

A "hands up those who like to play with Billy"

approach to social relationships tells us nothing about Billy's interactions with others, nor how others respond to him, let alone how motivated he is to engage in peer interaction. Further, the low sociometric status group may include both children who do actually experience difficulties in their relationships with others and those who are not peer-oriented but, at the same time, are not maladjusted. Coates, Lord and Jakabovics (1975) found that children who spent more time in non-social play were more field-independent than children who did engage in social play. They thus concluded that social orientation is linked with field dependent cognitive functioning in preschool children. Thus, the child's attitude to his social predicament is surely worth considering when his social predicament is to be examined. Indeed, popularity could reflect a type of social orientation. This possibility is posed by Masters and Furman's (1981) finding that the distinctive feature of popular children is that they tend to interact with many children.

Whether or not sociometric stratification reflects a form of social organisation is unclear. Noting that different studies have yielded convergent findings insofar as the behavioural correlates of sociometric status are concerned, Cairns (1983) suggests that "the roles children occupy in the social network may provide a catalyst of stability" (page 343) but how popularity/acceptance is a regulative factor in children's relationships has not been demonstrated. Much research has tended to deal with the

upper and lower strata of a group (popular-unpopular) who are rendered salient by statistical significance, thus leaving neglected the child in the middle who does not yield statistically significant results:

"the overlooked child takes a spot some place between the top and the bottom - neither popular nor unpopular." Moore, 1964; page 283)

Differential rates of emission of positive and negative behaviour correlate with sociometric status but are not descriptive of relationships but rather of the behaviours of individuals. Vaughn and Waters (1981) theorize that the distribution of attention reflects a social organisation based on social competence which is gauged by popularity. The distribution of attention was found to correlate with sociometric status which correlated with their interactive play measures. The researchers assert that high sociometric status children may be watched more because they possess skills that children of lower status can learn. Thus Vaughn and Waters argue that social competence "is a more salient basis for social organisation among preschool children than either the distribution of attention per se or competition/dominance relationships" (page 275). On the other hand, Masters and Furman (1981) recorded the identity of the children receiving initiations (which Vaughn and Waters did not do with their interactive play measures) and found that popular children are not distinguishable because of their general behaviours per se but because of the breadth of their social contacts:

"They are . . . not popular because of their general social behaviour but because of their specific interchanges with a large number of children. That is, a child's attraction to a peer is not affected by the peer's behaviour towards others but only by the peer's behaviour towards that child." (page 349)

Thus, it is possible that popular children may be more salient (i.e. receive more attention) because they are more acquainted with a wider circle of peers than say, average children who don't cultivate the company of so many children. This speculation does, of course, require empirical validation.

A major difficulty with much of the research is that friendship skills are associated with popularity. However, friendship and popularity are definitionally distinct, the former referring to a relationship the latter to degree of agreement about a particular individual. Duck et al (1980), in addressing this issue, suggest that "different causal mechanisms may be operative" (page 94). Certainly it is not clear how sociometric status is operative in the formation and maintenance of friendships. Masters and Furman (1981) found that friendship selection did not relate to popularity and thus urge a distinction be made between "general interaction patterns affecting sociometric status and specific interaction affecting friendship selection" (page 344). In a study of clique membership in five to eleven year old children, Miller and Gentry (1980) found a weak

relationship with popularity. On the other hand, Ladd (1983) found social networks comprising sociometrically distinct children (popular, average and rejected) however the problem remains that sociometric status describes individual children within the network but cannot be used as an explanation for the formation of the network per se. Thus it would seem that Masters and Furman's suggestion that "the general character of popularity requires reconceptualization" (page 349) is not unjustified.

Conclusion

The above three approaches have all considered the group in terms of linear rankings along a pre-selected dimension. Hence, each child's relative position within the social structure is dependent upon, and determined by, the positions of others in a manner that conforms to a hierarchically-structured model. However, sociometric structures are distinct from attention and dominance structures in that the latter are constructed from the occurrence of specific behaviours, the former from peer nominations.

Resultant structures are theorized to have predictive validity. For example, a dominance structure describes the outcome of potential encounters, e.g., if A is dominant to B, A will win access to the rocking horse in the event of a struggle over the toy with B. Many investigations have extended the implications of an individual's

sociometric status beyond its definitional context, suggesting that it is predictive of later socio-emotional and academic functioning. Low sociometric status has been found to be related to mental health problems in later life (Cowen et al, 1973), to delinquency (Roff et al, 1972) and to low achievement in school (Bonney, 1971; Coie and Dodge, 1983). Thus, tests of sociometric status are regarded in the research literature as having diagnostic and prognostic potential, indicating those children who are 'at risk'.

Some of the attention and dominance structure literature stress the ontogenetic significance of a hierarchically-structured group organization. This is implicit in Omark's and Edelman's (1976) assumption of a functional identity between the child's identification of the hierarchical organization characterizing his peer group's dominance relations and performance on seriation tasks. A stress on hierarchical organization is also evident in the following remark by Abramovitch (1980) in which she seems to assume that linear arrangements exhaust all possible forms of social structure:

"It seems obvious that the full range of behaviour on which group members can be rank ordered needs to be investigated in order to understand fully group structure, and in particular the operation of attention. While this work is certainly slow and painstaking, it would be very useful to have observational data on many different hierarchies or rank orders within a given

group. It might then be possible to specify the interrelations among the various behaviours and be possible to discover some structure underlying the many different behaviours." (pages 395-396, my emphases)

A particular problem inherent in the linear arrangement of a group along a particular dimension is that it tends to result in the isolation of extremes. It is these children who both yield statistically significant results in investigations of behavioural correlates and engage in behaviours that render them more salient in observation sessions. The 'average' child is thereby neglected yet we are provided with no evidence that he, say, conducts his relationships in a less competent manner than the popular child. This is a difficulty that is present in all of the structural approaches reviewed above (e.g. Berndt, 1983; Hold, 1976; Vaughn and Waters, 1981).

A further problem posed by arranging children along a pre-selected dimension is that individual differences get submerged under assumptions of homogeneity. However, these individual differences may be important to an understanding of not only the child himself, but to an understanding of his relationships with others and hence, to group structure itself. A nursery class does not constitute a homogeneous unit. For example, not all children are equally motivated to be popular or win in agonistic encounters. This necessarily has implications for the functional significance of any structure a

researcher isolates. For example, some children prefer solitary play activities. Thus, they may tend to be overlooked in popularity ratings though engaging in solitary play is not necessarily an index of social inadequacy as Moore et al (1974) have demonstrated:

"most solitary play observed was indicative of independence and maturity rather than immaturity and dependency." (page 830)

Similarly, in treating dominance as a unitary construct, and thereby singularly classifying all aggressive interactions over objects or space as agonistic exchanges, social, personality and contextual features that inhere in the encounter may not emerge. Manning et al (1978) found the context within which expressions of aggression occur - i.e., activity-related, non-activity-related, provoked, unprovoked - to be directly related to social and emotional adjustment. Further, a relationship was found with maternal interaction style. For example, the mothers of 'teasers' tended to be controlling and over-manipulative. Similarly, Montagner et al (1974) found that dominant children constitute a heterogeneous group, distinguishable from each other by the nature of the relationship between appeasement and aggressive behaviours. A positive relationship was found between these behaviours for 'leaders' who organised friendly activities, a negative relationship characterized children who disrupted group activities. Mothers of the former tended to engage in a wide range of appeasement behaviours themselves

contrary to mothers of the latter group.

Children may be arranged along a hierarchy but the reasons underlying their relative positions within that structure appear to be diverse. The research considered above indicates that differences in personality and interactional style characterize children's groups. Though sociometric as well as dominance and attention structure research have indicated that children's interactions do appear to be characterized by consistency, stability and selectivity, the functional significance of the structures theorists propose to characterize group processes has not been demonstrated.

Assumptions have been made but not subjected to empirical verification, for example, the regulative function of dominance hierarchies. Further research is needed on the actual social context within which these behaviours occur. The behaviours under study did not occur within a void but within a relationship between particular individuals engaged in a particular activity and so forth. Similarly the characteristics associated with different levels of sociometric status are ultimately derived from relationships between particular individuals. Behaviours or relationships cannot be extracted from their context of occurrence and adequately understood neither from a descriptive nor a functional point of view.

For a social system to exist there has to be, first of all, some degree of tacit acceptance of this structure, i.e. the children must be engaging to some degree in

cooperative behaviours in order for this structure to occur and be maintained:

"Personal relationships and other human groupings do not exist and function as matters of fact, but are maintained by the intention of their members to maintain them; without such intentions they collapse. Thus they cannot simply be observed and described from the standpoint of an external observer, for . . . it is their projected or prospective ends which structure people's actions not their attained ends."

(Shotter, 1974; page 223)

None of the approaches we have been considering address this issue. Thus, while acknowledging the importance of the contribution they have made to our knowledge of pre-school social behaviour, I suggest a structural approach based on an investigation of the formation and maintenance of friendship groups. As these groups are organized by the children themselves, such an investigation may provide us with more information on how young children structure and maintain their social worlds.

Analysis of interaction frequencies:

It is a common observation that children form small friendship groups around the ages of four to five years old (e.g. Parten, 1932, e.g. Piaget, 1951). These groups comprise a minimum of two children and a maximum of four or five. Friendship has been noted to be selective and relatively stable (e.g. Masters and Furman, 1981; Asher et al, 1977). If a social structure based on the

organization of friendship preferences does characterize the relationships of the children comprising the sample, then their interaction frequencies should be selectively distributed. This will be investigated below:

A. Total interaction frequencies:

Total interaction frequencies over the observation period yield the matrix in Table 3.1. Turning our attention to the sample of fourteen children, we can see that interaction frequencies appear to be selectively distributed. Particular children seem to either:

- a) interact more frequently with each other than with other children within the sample
- b) do not interact frequently with each other, but each interacts frequently with a third child in the sample.

To illustrate: Fiona and Colin interact 44 times.

Arthur and Fiona interact 132 times.

Arthur and Colin interact 183 times.

Thus Arthur is the 'interactive link' between Fiona and Colin.

B. Sociographic Analysis:

To see if any form of social organization based on the above two criteria did emerge, a sociographic analysis of the sample's interaction frequencies was undertaken (based on Sade, 1972). The resultant structure is presented in Table 3.2.

Table 3.1

Total Interaction Frequencies

.	A	B	C	D	E	F	G	H	I	J	K	L	M	N	X	Y	Z
A		148	183	204	111	132	36	32	39	47	3	45	11	30	68	74	9
B			164	109	189	112	52	36	72	21	9	28	35	16	78	46	19
C				250	117	44	77	28	71	35	12	65	24	10	50	42	13
D					218	56	42	67	143	23	25	33	13	18	39	20	13
E						139	27	37	28	34	3	31	7	19	81	55	12
F							103	13	15	14	10	15	21	12	72	80	3
G								115	232	143	10	11	9	13	64	30	13
H									34	78	7	14	2	6	58	41	10
I										148	2	28	23	14	37	45	11
J											12	15	24	43	72	60	7
K												397	23	44	63	53	8
L													26	31	60	85	21
M														172	222	64	2
N															118	42	6

Notes:

A to N corresponds to first letter of each child's name within the sample.

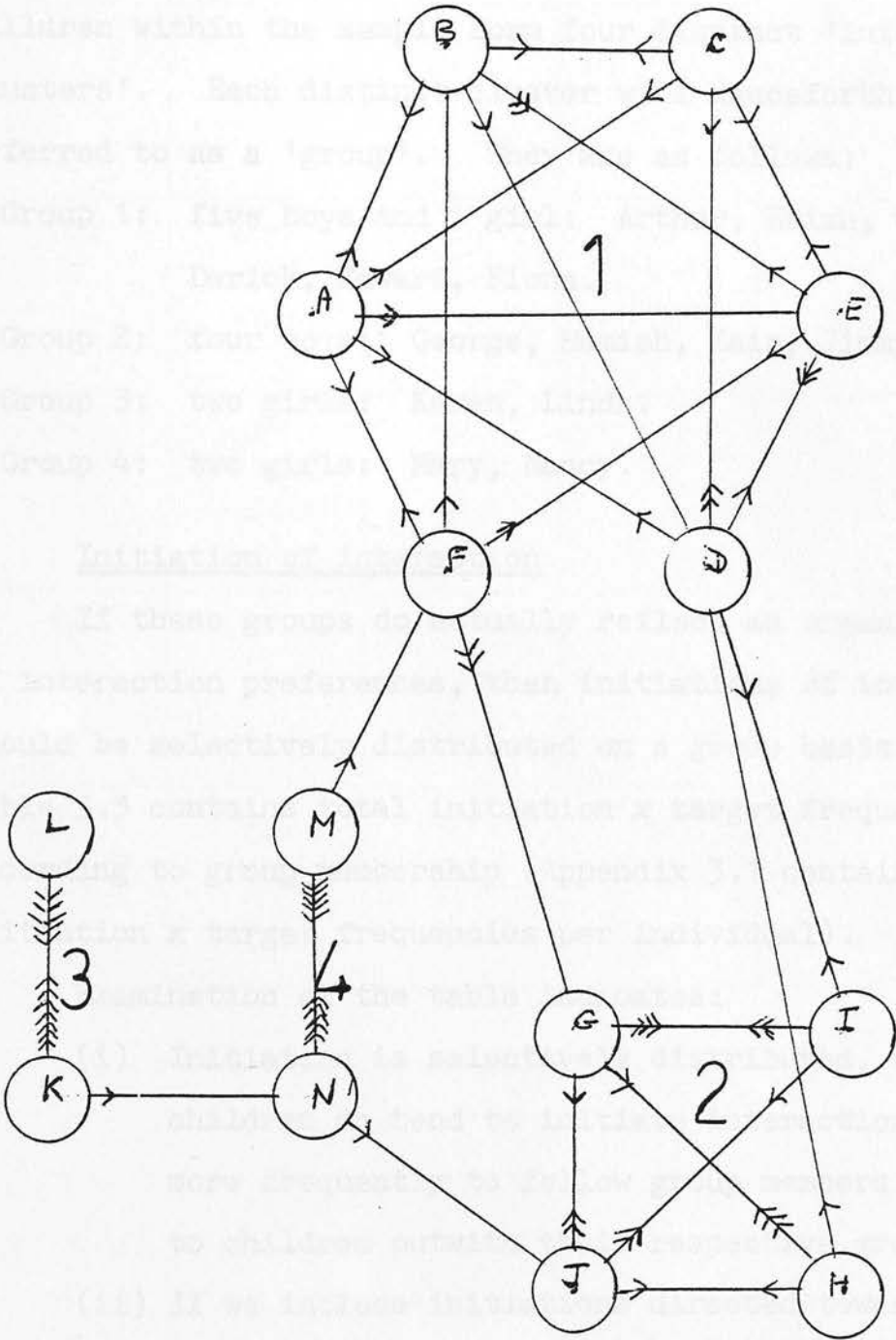
X : Younger children.

Y : Teachers.

Z : Adult visitors.

Table 3.2

Sociographic Analysis of Social Organization.



→ ≥ 10% → → ≥ 20% etc.

Examination of the sociogram indicates that the children within the sample form four distinct 'interacting clusters'. Each distinct cluster will henceforth be referred to as a 'group'. They are as follows:

Group 1: five boys and 1 girl: Arthur, Brian, Colin, Derick, Edward, Fiona.

Group 2: four boys: George, Hamish, Iain, Jimmy.

Group 3: two girls: Karen, Linda.

Group 4: two girls: Mary, Nancy.

C. Initiation of interaction

If these groups do actually reflect an organization of interaction preferences, then initiations of interaction should be selectively distributed on a group basis.

Table 3.3 contains total initiation x target frequencies according to group membership (Appendix 3.1 contains initiation x target frequencies per individual).

Examination of the table indicates:

- (i) Initiation is selectively distributed, i.e., children do tend to initiate interactions more frequently to fellow group members than to children outwith their respective groups.
- (ii) If we include initiations directed towards younger children in our considerations, we notice an inverse relationship between intra-group initiation frequencies and frequency of initiations directed towards younger children. The frequency of initiations directed towards

Table 3.3

	0	1	2	3	4	TOTAL
0		81 29 %	42 15 %	34 12 %	127 45 %	284
1	307 9 %	2176 61 % (67 %)	724 20 % (22 %)	204 6 % (6 %)	153 4 % (5 %)	3564
2	189 13 %	368 26 % (30 %)	750 52 % (60 %)	45 3 % (4 %)	82 6 % (7 %)	1434
3	89 13 %	75 11 % (13 %)	54 8 % (9 %)	397 58 % (66 %)	72 10 % (12 %)	687
4	213 39 %	63 11 % (19 %)	52 9 % (15 %)	52 9 % (15 %)	172 31 % (51 %)	552

Total Interaction Frequency by Group.

Notes:

- (i) Group 0 = younger children.
- (ii) Younger children were only observed in their interaction with the sample children, so that no score is recorded in cell 0/0.
- (iii) Percentages indicated are of cell scores vs. row totals; in rows 1 - 4 the second, bracketed () percentages are formed excluding group 0.

these children progressively increase from Group 1 to Group 4, who initiate more frequently towards younger children than within their own group. A correlational analysis between intra-group initiation and initiation towards younger children yielded a Pearson coefficient of $-.98$ ($p < .001$), $df=2$. Children who show a greater interest in each other are less interested in younger children.

Interpreting the meaning of this correlation is difficult in view of the differences in group size. However, it is interesting that Group 4 do direct their interactions towards younger children than towards the children in the sample who are more within their own age group. (Most of the younger children were born in 1976 and thus were barely three years old at the time of data collection.) Shatz and Gelman (1975) have noted that four year old children reduce the complexity of their speech in interactions with younger children. Qualitative differences in interactions between mixed-age dyads compared to those of same-age dyads have been reported in the research literature (e.g. Foot et al, 1979; Lougee et al, 1977). Many researchers have observed that girls pay greater attention to the younger children in their nursery than do boys. For example, McGrew (1972) found that girls showed much more interest in newcomers to the nursery, many of them displaying protective behaviours.

Boys, on the other hand, tended to be indifferent. In any event, in so far as the sample of older children is concerned, Mary and Nancy do show a distinct preference for each other, therein confirming the hypothesis of selectivity.

D. Reciprocity:

Given that 'interaction x target' frequencies are selectively distributed, the structure underlying this distribution must be addressed. In the consideration of dominance, attention and sociometric theories above, it was noted that groups of children were organized on a linear basis. The degree of linearity inherent in group interactions has been approached in terms of symmetrical/asymmetrical, transitive/intransitive and hierarchical arrangements. 'Fitting' relationships into a mathematical model facilitates methodological goals in rendering relationships explicable in quantitative terms. Reciprocity may be defined as a 'symmetrical' relationship (e.g. Hinde, 1979). Strain and Shores (1977) discuss the importance of "developing reciprocal interaction", defining reciprocity as "dyadic interaction in which persons A and B reinforce each other at an equitable rate". Leiter (1977) adopts a similar definition: "dyadic interactions in which a social initiation by one person is followed by a social response by another".

However, such definitions may place artificial constraints upon an ongoing relationship. Differential

rates of activity by individuals within the dyad may in themselves preclude a one-to-one relationship between act and receipt of response. Contingencies inherent in long-term, compared to short-term interactions, further complicate this issue.

To investigate the relationship between initiation and receipt of initiation in the sample of children under study, the following correlational analyses were undertaken. For Groups 1 and 2:

- (i) initiation and receipt within the group
(e.g. Group 1 members to Group 1 members)
- (ii) initiation and ~~receipt~~ with non-group
members (e.g. Group 1 members to Group 2
members).

It was hypothesized that there would be a higher correlation between initiation and receipt of initiation in interactions outside the group than within group interactions. The rationale underlying this hypothesis is the following:

The quantitative analyses of interaction frequencies indicate that children spend longer periods with certain children than with others. This suggests differential social preferences. More complex interactions will necessarily lead to a distortion of the act-response relationships simply because a relationship that lasts over time is

- a) less dependent on an immediate response than *is*
a short-term relationship (primarily as a
function of length of time together)

- b) qualitatively different from a short-term relationship. For example children interacting over a period of time may be mutually engaged in an activity such as building a ship. In these situations, statements will frequently occur that do not necessarily require a response, e.g., "I'm putting this block here". Mutual ground exists between the children that will not inhere in shorter term relationships, e.g., 'passer-by' to child at art table: "Is this your lighthouse? It's good."

Results

- i) Initiation and receipt of initiation within group: Results of analyses are presented in Table 3.4. They are in the predicted direction for Group 1. Correlational analysis yielded a Pearson coefficient of .23 (not significant), $df=4$. In contrast, Group 2 interactions appear to be characterized by a more reciprocal relationship; a coefficient of .81 ($df=2$, .05 significance) was achieved.
- ii) Initiation and receipt with non-group members: Returning our attention to Table 3.4, we note that Group 1's interactions with non-group members show a more reciprocal relationship between initiation and receipt than their internal interactions. However, the correlation is still quite low at .59

Table 3.4

Frequencies of occurrence as initiator and as target for Groups 1 and 2.

	Within group		With non-group members		
Name	Initiator	Target	Initiator	Target	
Arthur	471	307	185	58	<u>GROUP 1</u>
Brian	388	344	196	73	
Colin	339	419	224	98	
Derick	432	405	240	124	
Edward	342	432	118	68	
Fiona	204	279	118	85	
r = .23 (N.S.)		r = .59 (N.S.)			

	Within group		With non-group members		
Name	Initiator	Target	Initiator	Target	
George	237	253	130	250	
Hamish	120	107	87	155	
Iain	185	229	175	260	<u>GROUP 2</u>
Jimmy	208	161	103	165	
	r = .81 (p < .11)		r = .91 (p < .05)		

(not significant ^{$df=4$}). The correlation between initiation and receipt similarly increases for Group 2 interactions with non-group members, a coefficient of .91 ($df=2$.05 significance) being achieved.

Thus, the internal interactions of Group 1 and Group 2 are characterized by a less reciprocal relationship between initiation and receipt of initiation than their external interactions. Obviously, this result is less marked for Group 1 than for Group 2 interactions.

An inverse relationship between reciprocity and degree of acquaintanceship has^{also} been reported in the adult research literature (Derlega, Wilson, Chaikin; 1976). Nevertheless, contingencies inherent in relationships per se appear to differentiate Group 2 interactions from Group 1 interactions.

The sizes of Group 3 and Group 4 precluded any correlational analyses of the relationship between initiation and receipt characterizing their interactions. Frequencies of initiation and receipt are presented in Table 3.5. Perusal of these frequencies indicates that their interactions are characterized by reciprocity. Differences in Group size between 1 and 2 as opposed to 3 and 4 necessarily places restraints on any comparison of results. Indeed the relationship between group interactions based on two persons and group interaction based on three or more is a contentious issue in the research literature. Cartwright and Zander argue that there are qualitative differences (1968). Whether or not this

Table 3.5

Frequencies of occurrence as initiator and as target for Groups 3 and 4.

Name	Within group		With non-group members	
	Initiator	Target	Initiator	Target
Karen	189	208	69	101
Linda	208	189	142	200
<u>GROUP 3</u>				
Name	Within group		With non-group members	
	Initiator	Target	Initiator	Target
Mary	83	89	77	141
Nancy	89	83	90	166
<u>GROUP 4</u>				

applies to groups of young children is at present an empirical question that will be addressed in following chapters.

Conclusion

The results of analyses conducted in this chapter indicate that a study of social structure based on children's friendships can be pursued. Children do appear to selectively establish relationships that are consistent,

We may thus isolate four distinct friendship groups. The distinction between these groups is emphasized by the inverse relationships found between frequency of internal interactions and frequency of interactions with younger children as well as the differential results of 'reciprocity' analyses for Groups 1 and 2. However, analyses of interaction frequencies informs us of the presence of differential relationships but not how these relationships are established and maintained. This will be addressed in the following chapters.

CHAPTER 4: COMMUNICATION

I Introduction

The distribution of interaction frequencies within the sample indicates the differentiation of four distinct groups. This suggests that children do structure their environment on the basis of affiliative preferences. This structure is thus a product of the children's own interactions. It does not reflect an order imposed upon the sample by someone who is socially extraneous to it (such as myself). However, the selective distribution of interaction frequencies informs us of no more than the presence of some form of structural organization. We know nothing about the processes by which children maintain and organize their social worlds from data that tells us who plays with whom and their respective interaction frequencies. The analyses of 'reciprocity' indicate that relationships cannot be captured within a quantitatively derived act-response paradigm.

Criticisms of dominance, attention and sociometric theories were based on the argument that they

- a) approached group relations within the confines of an experimentally defined, pre-selected dimension,
- b) extracted behaviours from the social context that were presumed to be definitive of this dimension. Thus, they informed us of an aspect of social organization, such as

expressions of liking or aggression, but not the social context in which they occurred. Yet if these aspects are inherent parts of early social organization, if they are consistent and sustained over time (which theoretically they should be), then the children must be engaging in interactions that are mutually meaningful:

"The social has to do with the recognition of the humanity of the other and the minimal mark of that recognition is the endowment of the action with meaning. It is not only an intentional meaning as seen by the actor, but is a meaningful social act as seen by one upon whom the action impinges."

(Harré, 1974, p. 225)

In Chapter 1 research was cited which argues that young children conceive friendship in terms of momentary interchanges which are self-referenced and based on personal involvement in an activity. Hence, physical parameters such as proximity are theorized to be essential determinants of interpersonal contact (e.g. Bigelow, 1977; Selman, 1980; Serafica, 1982). Egocentrism is held to provide cause and explanation for this phenomenon, rendering the young child unable to apprehend peers as subjectively distinct. On the other hand, analyses of interaction frequencies conducted in the previous chapter indicate that children do have enduring friends. Masters and Furman (1981) found friendship to be selectively organised. Strayer (1980) also reports findings of a stable affiliative organisation in preschool children.

We thus have two theoretically distinct research findings which seem to contradict each other, i.e., 'If children don't perceive others in enduring terms, how do they establish and maintain enduring friendships?' Separating the child into Thinker and Actor necessarily begs the question of 'how do we put him back together again?'. .

As noted in Chapter 1, Glick (1978) asserts that social life requires one not so much to have a "theory of social actors" but rather to "maintain and sustain coherent courses of interaction which are related coherently to an interactive context" (p. 3). If the children upon whom this study is based do establish differential relationships that are consistent and stable over time, then one would expect them to be able to meet this requirement, i.e., they should be engaging in mutually meaningful interactions. Such interactions are necessarily based on mutual obligation since a social act implicitly obliges an addressee to respond in a particular way to maintain coherence and thus, the interaction. Hence the signification of an act lies not only in its content per se, but also in its semantic relation to the antecedent act, i.e., it is bound within a social context. Shields (1978) as well as Keenan and Klein (1975) have similarly stressed a 'semantic dependence' between acts in their studies of children's conversations.

An act therefore, cannot be assigned a communicative value independently of its context of occurrence. A

major difficulty with Piaget's (1926) classification of children's conversations is that speech is categorised in terms of developmental processes within the individual rather than in terms of its relevance to the ongoing interaction. This is implicit in his taxonomy of "egocentric speech". For example, repetition of words and syllables are classified as manifestations of egocentric speech because of their lack of any intrinsic informational or truth value. Keenan and Klein (1975) have demonstrated that a repetitive exchange of nonsense syllables can be communicatively structured in children as young as two years and nine months, i.e., a turn-taking dialogue that is phonologically coherent. As noted in Chapter 1, in Piagetian theory social development is asserted to be ultimately the result of internal processes which develop in a manner that is fixed and sequentially invariant. Therefore acts that occur in the course of an interaction are considered from the perspective of intra-individual constraints. Indeed, Keenan and Klein assert that the use of concepts like egocentrism by definition presume the child's and the adult's use of language to be discontinuous such that it is difficult to see how the developmental transition occurs. Indeed words in themselves can provide pleasure such that we have communicative structures that are phonologically derived. In the formalized world of 'adult play' we may find this expressed in poetry, e.g., syllabic meter, rhyme, rhythm,

assonance, features that can also occur in young children's interactions, for example:

Linda is swinging on the climbing frame, Karen is climbing.

Linda: "Swing high . . . this is good fun swinging on this. You could try it later on but I might be on it all day."

Karen: "I don't want to try it because I'm afraid of heights."

Linda: "Are you a bit: 'Hei! Hei! Hei! Heights! Heights!'"

The extent to which young children's interactions are constrained by egocentrism has now been widely challenged (e.g. Mueller, 1972; Garvey and Hogan, 1973; Keenan, 1973; Gottman and Parkhurst, 1980). For example, Gottman and Parkhurst found that collective monologues were more likely to occur among strangers than among friends but failed to find any significant correlations between age and collective monologue in children 2.11 to 6.1 years. This suggests that contingencies inherent in the relationship per se (such as degree of familiarity) may exercise a determinative role in communicative success. Indeed, they also found that older children (5 to 6.1 years) were more likely to respond inadequately to requests for information or clarity. Noting that this latter finding contradicts theoretical expectations about children's communicative competence, they ask:

"Is it possible that there is something about friendship in young children that makes communication clarity vital?" (page 225)

Communication clarity is of course predicated upon meaning that is mutually held. As Freeman et al (1982) writes:

"To understand the way a speaker intends an utterance to be used, requires agreement over a frame of reference." (page 54)

Keenan and Klein (1975) found this agreement in subjects who were, as noted above, 2.9 years:

"After a new topic has become established, and both children can take for granted that they are talking about the same thing, it becomes possible for them to use pronouns anaphorically . . . The referent has become part of the context in that both children can presume, or take for granted, that the object has been identified or located within their mutual sphere of attention. Anaphoric pronouns are used with similar presuppositions by adult speakers." (p. 373)

Frame of reference is thus provided by the theme upon which an interaction is based. An interaction that is coherent is rendered so by thematic continuity which in turn requires apprehension of communicative intent. Discontinuity may occur when an addressee fails to apprehend communicative intent. Consider the following interaction:

Linda is painting alone. Mary approaches and says:

"Linda, let's get dressed up."

Linda: "I'm dressed already."

Mary, with emphasis: "No, let's get dressed up."

Linda, with emphasis: "I'm dressed already."

Mary leaves, goes to 'dressing up' area.

Linda runs after her, saying: "Mary let's get dressed up."

Here we see Linda making a joke on Mary's statement though she obviously comprehends its actual meaning. On the other hand, Mary misunderstands Linda, thus a thematically dissonant interaction occurs. Linda 'rectifies' communication by later responding to the meaning intended by Mary and the interaction can thereby continue. In other instances, implied meaning may be actively interpreted. This is illustrated in the following interaction:

Some children are discussing where they are going on holiday:

Brian, smiling: "I'm going far away and you'll never see me again."

Iain: "Where are you going?"

Derick: "He doesn't know really."

Though it is not clear whether or not Iain did understand Brian's joke (i.e., communicative intent), Derick obviously did and, moreover, he relayed his interpretation of Brian's remark to Iain. We can see in the above two examples children selectively choosing a certain aspect of an utterance and basing their response upon it. There is an interest in meaning per se. This is strikingly

illustrated in Linda's efforts to restore mutual meaning, i.e. thematic consonance, so that an interaction can continue. However, in both interactions, the content of an act is semantically bound to a context created by the antecedent acts of others. Communication is therefore actively pursued.

As noted in Chapter 2, a social structure based on relationships presupposes communication. Communication, by definition, implies mutually meaningful interactions. This is discussed above. Therefore proposing a social structure based on affiliative preferences requires one to demonstrate that children do have these type of interactions, i.e., that they are interacting within a mutually meaningful framework. For the purposes of a communication analysis, meaning has been operationalized by using the concept of theme, "a subject set or proposed for discussion" (Chambers Twentieth Century Dictionary). The rationale underlying this approach is that it may enable one to circumvent the limits inherent in isolating aspects of an interaction since it necessarily refers to the relation between those aspects. As argued above, it is this relation that renders communication possible:

"although turn-taking is a basic feature of dialogue, it is clearly not sufficient that the speakers should take turns, there also has to be some cohesion between the remarks so that each one is dependent on what went on before, and forms a link with what comes after which is indicated either by continuity of theme or by structural continuity of some sort." (Sheilds, 1978, p. 317)

Categories employed for the communication analysis and results are presented below.

II Categories

As noted in Chapter 2, all acts were categorised according to (a) their conduciveness to continued interaction and, (b) their thematic relation to antecedent acts. Below are descriptions of the categories employed. Inter-coder reliability coefficients for the individual categories are presented in brackets.

(a) Social Conduciveness (1.0)

This category was designed to gauge 'social climate' by distinguishing interactions involving agreement.

(i) Open (1.0): Agreeable acts that are conducive to an interaction.

Example: Edward and Fiona are in the hospital, Fiona, the 'patient' is getting into bed. Nancy approaches and tells Fiona to remove her boots,

Nancy: "I've got red boots." OPEN

Fiona: "Have you got them on?" OPEN

Nancy: "No." OPEN

Edward: "I've got black boots." OPEN

(ii) Closed (1.0): Acts involving some form of disagreement or conflict.

Example: Linda and Derick are on the climbing frame together.

Derick: "We're going gymnastics." OPEN

Linda: "No it isn't. No it isn't." CLOSED

My teacher tells me it's not gymnastics at school."

Derick: "You don't go to school." CLOSED

You go to nursery."

'Open' and 'Closed' are mutually exclusive categories.

They are not concerned with the extent to which acts are thematically consonant however, in some cases, coding had to be based on the nature of the antecedent act. For example, Mary and a younger child are having tea in the Wendy House. They start discussing the colour of the walls.

Younger child: "This is pink too."

Mary: "Everything pink."

Younger child: "And white."

Mary: "And there is blue."

Younger child: "Yeah, alright, or pink."

Mary: "Mhm."

The above monosyllabic response was coded as 'Open', however in other cases, monosyllables may be coded as 'Closed'. For example, in the following interaction, two children are attempting to reclaim their 'ship'.

Derick - Hamish and Jimmy: "Get off our ship!"

Edward - Hamish and Jimmy: "Yeah!"

The rationale for coding "Mhm" as 'Open' and "Yeah" as 'Closed' lay in the different contexts in which these acts occurred. Mary and the younger child are having a friendly conversation, "Mhm" functions as agreement with the younger child within that context. However, the second interaction was of a clearly unfriendly nature. The function of Edward's agreeing with Derick is to oust Hamish and Jimmy from a particular area rather than to maintain an interaction with them.

Thus, classifying acts within 'Open' and 'Closed' categories was necessarily interpretive. As stated in Chapter 2, in a semantically-based classification of speech, this cannot be avoided. However, the high reliability coefficients suggest that the categories are not difficult to apply and that the distinction between 'Open' and 'Closed' is clear.

(b) Thematic sub-categories (.87)

All acts were further coded on the basis of their semantic relation to antecedent acts by means of the following classification scheme. The categories are discrete and mutually exclusive.

1. Development: Acts which constitute a continuation or development of the ongoing topic of interaction.

(i) introduce: Acts were placed in this category when they were presented as a topic for conversation and did not constitute an interruption of any previous activity. It thus marks the start of a

particular topic and cannot be coded for thematic continuity. A reliability check for this category therefore seemed unnecessary. It was included in the 'Development' category as it signifies the commencement of a conversation.

Example: Colin and Douglas are working alongside each other at the art table.

Colin: "Are you going to the Meadow's Festival today?" INTRODUCE

Derick: "Yes, I am."

Colin: "I'm going tomorrow because it's Jenny's birthday today."

(ii) radial (.90): acts that involve an expansion of a particular topic of conversation without the addition of new elements.

Example: Karen and Linda are at the dough table, they have been talking about how much easier it is to roll dough that is soft.

Karen: "I'm making it soft" RADIAL

Linda touches Karen's dough and says: RADIAL
"It isn't soft."

(iii) tangential (.80): acts which add a new element to the ongoing theme.

Example: Linda is swinging on the climbing frame, Karen is there too.

Linda: "Watch me" Linda swings. INTRODUCE

Linda: "Was that good?" RADIAL

Karen: "Yes." RADIAL

Linda: "Really hard work when I go to
gymnastics. It makes me learn." TANGENTIAL

(iv) repetition and development (.90): part of a
previous act is repeated with an additional new
element.

Example:

Edward: "I can tie knots with my hands." INTRODUCE

Colin: "I can tie knots with my arms." REPETITION
AND
DEVELOPMENT

Derick: "I can tie knots with my face." REPETITION
AND
DEVELOPMENT

(v) adjust divert (.77): acts which involve an
adjustment to a changed topic of conversation (see
External Categories below).

Example: Brian and Colin are 'camping' in their 'caravan'.

Brian: "It's starting to get late so we
should put the lights on." TANGENTIAL

Colin: "Put the lights on." RADIAL

Colin points to the lettering on his t-shirt,
says: "What's that?" CHANGE TOPIC

Brian: "It says 'Watch out For the
Giants'." ADJUST
DIVERT

Colin: "No, it says 'New York Giants'." RADIAL

(vi) adjust return (.90): acts which involve a
return to the topic of conversation which was
underway prior to the change (see External categories
below).

Example: Nancy and a younger child have been quarrelling on the climbing frame, Nancy is climbing.

Nancy: "I'm up here!" CHANGED TOPIC

Younger child: "You're a naughty girl!" ADJUST RETURN

Nancy: "I'm a good girl. I'm going RADIAL

to tell you you're a naughty

girl: 'You're a naughty girl,

Sally! . . . and some girls are

good!"

Comments on 'Adjust return' and 'Adjust divert':

These two categories were specifically designed to gauge responses to changes in ongoing topic of interaction. They were subsumed within the superordinate category 'Development' because they incorporate acts which explicitly acknowledge the change by either accepting (adjust divert) or rejecting it (adjust return).

(b) Static

Acts which do not develop the ongoing topic of interaction.

(i) not significant (.75): acts which are thematically superfluous, serving no overt contributory function.

Example: Mary and a younger child are having 'tea' in the Wendy House. They start to discuss the colour of the walls.

Younger child: "This is pink too"	CHANGE TOPIC
Mary: "Everything pink"	ADJUST DIVERT
Younger child: "And white"	RADIAL
Mary: "And there is blue"	RADIAL
Younger child: "Yeah, alright or pink"	RADIAL
Mary: "Mhm"	NOT SIGNIFICANT
Younger child gives Mary his tea cup, saying: "I want some more."	ADJUST RETURN

This category comprises mainly monosyllables. Monosyllables that were answers to questions, however, were included in the 'radial' category since they are explicitly contributing to the ongoing topic of conversation, for example:

Nancy: "I've got red boots"	CHANGE TOPIC
Fiona: "Have you got them on?"	ADJUST DIVERT
Nancy: "No."	RADIAL

(ii) imitation (1.0): repetition of another child's act.

Example: Arthur is telling Hamish and Edward not to frighten the 'pussy cat' (Fiona).

Edward: "She's scared."	RADIAL
Hamish: "She's scared."	IMITATION
Arthur: "She's scared."	IMITATION

(iii) self-repetition (1.0): repetition of one's own act.

Example: Edward and Arthur are having their snack.

Edward: "They're not letting us on the bricks."	INTRODUCE
--	-----------

Arthur: "Yeah." NOT SIGNIFICANT
 Edward: "They're not letting us SELF-REPETITION
 on the bricks."

(c) External

Acts that interrupt an ongoing topic of interaction. They are collectively referred to in the above examples as 'change topic'.

(i) athematic (.80): acts that are thematically askew in that they don't 'fit in' or 'make sense' with the preceding acts.

Example: Derick and Colin remark that their brothers attend the same school.

Arthur, re his brother: "I'm going to RADIAL
 Michael's school."

Edward: "I'll run fast to school." ATHEMATIC

Arthur: "You going to Michael's ADJUST RETURN
 school?"

Edward: "Yes." RADIAL

(ii) incidental (.80): acts that involve a response to a peripheral aspect of what someone has just said rather than to the actual topic of interaction.

Example: Arthur, Linda and a younger boy are having their snack.

Arthur, re younger boy: "Do you know her?" INTRODUCE

Linda: "It's not a girl." INCIDENTAL

Arthur: "Do you know her? Do you?" ADJUST RETURN

(iii) parenthetic (1.0): acts that are completely unrelated to the ongoing topic of interaction.

Example: Colin and Derick are playing 'Cowboys'.

Derick: "It's a sunny day, isn't it?" PARENTHETIC

Colin: "Yes." ADJUST DIVERT

Derick and Colin are walking together.

Colin: "Indians coming! Quick!" ADJUST RETURN

(iv) inappropriate (.75): acts that do not bear any semantic relation to antecedent acts and further, do not appear to have any expressed meaning themselves.

Example: Linda is pushing a doll in a pram. She says she is 'shopping'.

Hamish leans into the pram and INAPPROPRIATE
swings the doll's arm back and forth
several times.

Linda: "Stop it." RADIAL

Comments on 'Inappropriate':

The 'inappropriate' category was only applied to non-verbal behaviours. It subsumes acts whose semantic relation to antecedent behaviours is not made evident by the actor. For example, in the interaction described above, it is not clear why Hamish is shaking the doll's arm. His act does not overtly relate to the stated theme of 'shopping', however, he could be pretending that he is a 'fellow-shopper greeting Linda's baby' in which case he is acknowledging her activity. Because it is not clear

whether or not these type of behaviours actually do constitute a change in topic, the categories 'adjust divert' and 'adjust return' were not employed for coding responses here. However, this sub-category was subsumed within the superordinate category, 'External' because contrary to the categories included in the 'Development' and 'Static' classifications, semantic relation to antecedent acts is unclear. This procedure necessarily means that I may have coded thematically distinct acts within the same category. However, the classification scheme employed can obviously only be applied to expressed topic of interaction and thus, this flaw seemed unavoidable.

Problems in application of 'theme' taxonomy:

The inferential nature of this scheme is its major challenge. Thus, the results of inter-coder reliability tests were extremely encouraging. Apart from the behaviours subsumed within the 'inappropriate' category, 'inferring meaning' was not particularly difficult. Most of the interactions recorded were verbally expressed, however, as noted in Chapter 2, nonverbal interactions were also recorded. Their meaning had to be inferred from accompanying utterances, to illustrate with an example:

Linda states that the object she is holding
(a piece of styrofoam) is a "gun". She then
aims the "gun" towards another child.

The latter act was coded as 'radial', its meaning was inferred from the antecedent act and this inference, in

turn, was the criterion upon which its thematic relation to the antecedent act was based.

Coding verbal utterances was obviously a more straightforward process however the meaning of monosyllables always had to be inferred from antecedent acts before thematic consonance could be ascertained. In a few cases the meaning of a child's utterance was classified by succeeding utterances. This is illustrated below:

- (1) Brian - Sally: "You're stupid. You kiss Billy."
- (2) Sally - Brian: "I'm not."
- (3) Brian - Sally: "You do."
- (4) Sally - Brian: "I'm not Billy."

In this example, the 'meaning' of utterance 2 was inferred from utterance 4. Utterance 2, "I'm not", could mean "I'm not stupid", however, utterance 4 suggests that Sally has misinterpreted Brian's statement. Thus, both utterance 2 and 4 were coded as being 'athematic'. Fortunately, interactions like this were infrequent.

III Analysis of Data

Given the stability and selectivity of group organization, it was theorized above that the children are engaging in interactions that are mutually meaningful, i.e. a high degree of thematic consonance should be evidenced in their inter-relationships. Thematic consonance underlies successful communication and successful communication is necessarily implicit in assertions of selective group organization.

Two distinct hypotheses result from these speculations:

- (i) the children can discriminate communicative intent
- (ii) the children are using the thematic categories in the same way, i.e. thematic consonance should be present in their interactions.

These hypotheses will be addressed below:

(i) Discrimination of communicative intent

Analysis will be sub-divided as follows:

- a) Responses to 'open' and 'closed' initiations.
- b) Open/Closed responses to initiations within the thematic sub-categories.
- c) Responses to thematically dissonant acts.
- d) Consideration of results.

a) Responses to 'open' and 'closed' initiations:

Table 4.1 presents 'Initiation' x 'Response' frequencies for 'open' and 'closed' behaviours. 'Open' initiations tend to receive an open response (89 per cent); only 11 per cent of responses to 'open' initiations are 'closed'. On the other hand, responses to 'closed' initiations tend to be more evenly distributed: 54 per cent are closed and 46 per cent 'open'.

b) Open/Closed Responses to Initiations within the thematic sub-categories:

Table 4.2 presents relative frequencies of 'open' and 'closed' responses to thematically-categorised 'open'

Table 4.1

OPEN-CLOSED BEHAVIOURS:

Initiation x Response

		RESPONSE		
		Open	Closed	
I N I T I A T I O N	Open	4331 (89%)	547 (11%)	4878 (83%)
	Closed	458 (46%)	528 (54%)	986 (17%)

5864

Percentages on extreme right are of row totals relative to grand total.

Table 4.2

Frequency of 'open' and 'closed' responses to initiations within the thematic sub-categories

R E S P O N S E

	OPEN	CLOSED	
introduce	620	93	O P E N I N I T I A T I O N S
radial	1495	145	
tangential	314	30	
repetition & development	99	8	
adjust divert	131	12	
adjust return	255	25	
not significant	475	85	
imitation	194	23	
self-repetition	305	38	
athematic	67	16	
incidental	123	8	
parenthetic	247	44	
inappropriate	6	20	

	OPEN	CLOSED	
radial	222	219	C L O S E D I N I T I A T I O N S
tangential	63	37	
adjust divert	37	44	
adjust return	14	22	
imitation	34	28	
self-repetition	28	81	
athematic	18	35	
incidental	12	14	
parenthetic	25	42	
inappropriate	5	6	

and 'closed' initiations. A comparison of the two tables indicates that closed behaviours were employed not only less frequently, but also less extensively insofar as the variety of the thematic sub-categories is concerned.

The strength of the relationship between type of act initiated (as defined by the thematic sub-categories) and whether or not it received an 'open' or 'closed' response was as follows: For 'open' initiations, the relationship was found to be highly significant at the .001 level

($\chi^2 = 11.2827$, Kruskal-Wallis, $d.f.=1$). In contrast, the relationship is not significant for 'closed initiations ($\chi^2 = .7557$, Kruskal-Wallis, $d.f.=1$).

Results of analyses in sections (a) and (b) suggest:

- (1) Children prefer to engage in interactions that are conducive to further interaction. Thus, we may deduce a desire or willingness to interact. Gottman and Parkhurst (1980) found in their study of dyadic interactions that younger children (under five years) were more concerned with establishing a climate of agreement than were older children (5 to 6.1 years). For example, they inhibited disagreement (e.g. through agreeing) to a greater extent than did the older children.
- (2) The distribution of responses to 'open' and 'closed' thematically defined initiations does not appear to be random, suggesting that some form of interpretive process is present, i.e. that children are interpreting the content of an act and are basing

their responses on perceived content. The absence of any significant relationship between initiation type and response for closed initiations is interesting. Closed behaviours may serve the two distinct functions of either rejecting a thematic line or rejecting a person. Consider the distinction between the following texts:

(i) rejection of thematic line:

Karen: Now, it's your turn to be patient.

Linda: No, I don't like having bandages on me.

(ii) rejection of a person:

Brian - Jimmy: "You're not my friend."

Obviously, these conversations have different social implications. The first interaction contains the possibility of continued interaction through 'thematic adjustments' in the conversation, i.e., Karen and Linda can do something else or Karen can agree to be a 'patient' again. The second interaction, on the other hand, excludes this possibility. This distinction between saying something 'negative' that does not terminate an interaction as opposed to saying something negative that does serve to terminate an interaction is central in a consideration of how children structure their social environment. One would expect the former to be more likely to lead to an open response than the latter. This hypothesis will be investigated in further detail later in Chapter 5.

c) Responses to thematically dissonant acts:

If thematic consonance is a regulative factor inherent in children's interactions, and children can discriminate communicative intent, then they should either adjust to thematically dissonant acts or reject them by returning to the original theme. Consider the following interaction:

Colin, Derick and Edward are painting,

Derick: "I have paint on my hands". INTRODUCE

Colin: "So have I." RADIAL

Derick: "I was painting at home one day TANGENT
and I left my dirty hands . . ."

Edward interrupts: "'cos my house has ATHEMATIC
paint as well."

Derick: "No, I paint." ADJUST RETURN

Edward: "My house has got paint as well" ATHEMATIC

Colin: "This is not what he means." ADJUST RETURN

Derick: "I paint. Have you painted?" ADJUST RETURN

Edward: "Yes." RADIAL

This interaction clearly illustrates an awareness of communicative intent. Derick appears to have comprehended the nature of Edward's misunderstanding of his remark and is trying to correct this misunderstanding, finally by actively steering him to a thematically consonant response i.e., "I paint. Have you painted?" Moreover, Colin understands the communicative intent of both children and hence, the nature of the resultant misunderstanding, i.e., "This is not what he means." As stated previously,

Table 4.3

Responses to External and Development Initiations

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		<u>RESPONSE</u>					
		Development ⁽¹⁾			Static	External	
		Introduce etc.	Divert	Return			
	Athematic	11 (8.1%)	50 (37%)	45 (33.3%)	16 (11.9%)	13 (9.6%)	135 (3.5%) ⁽²⁾
	Incidental	12 (7.7%)	54 (34.6%)	58 (37.2%)	17 (10.9%)	15 (9.6%)	156 (4%)
	Parenthetic	14 (4.2%)	122 (36.6%)	91 (27.2%)	58 (17.4%)	49 (14.7%)	334 (8.7%)
	Radial	1386 (66.9%)	9 (.4%)	46 (2.2%)	349 (16.8%)	283 (13.7%)	2073 (53.8%)
	Tangential	259 (58.5%)	2 (.5%)	4 (.9%)	81 (18.3%)	97 (21.9%)	443 (11.5%)
	Introduce	584 (82%)	0	0	97 (13.6%)	31 (4.4%)	712 (18.5%)

3853

(1) For the purposes of this analysis, 'Divert' (adjust to thematic change) and 'Return' (return to original theme) were separated from the other categories subsumed within 'Development'.

(2) Percentages on the extreme right are of row totals relative to the grand total.

3) Consideration of results

The above analysis indicates that children do not approach their social environment in a random and haphazard manner;

- (1) They show a distinct preference for interactions that are conducive to further interactions.

sustained relationships presuppose thematically consonant interactions. Thus, misunderstandings like the one above should be actively rectified by the children themselves.

This hypothesis was addressed by investigating the distribution of responses to 'External' initiations.

The results are presented in Table 4.3.

Examination of the table indicates that

- (1) Children prefer responses involving thematic progression to those involving thematic digression.
- (2) Children know when thematic dissonance has occurred. They tend to respond to its occurrence by re-establishing thematic consonance either through 'picking up' on the new theme (adjust divert) or through returning to the original theme (adjust return). 'Adjust divert' and 'adjust return' responses will follow 'Development' initiations ('radial' and 'tangential') when adjustment to dissonance is not immediate. This occurs infrequently. Thematic dissonance tends to be addressed immediately. The hypothesis under examination is thus confirmed. Thematic consonance does appear to be a regulative factor in children's interactions.

d) Consideration of results

The above analyses indicate that children do not approach their social environment in a random and haphazard manner:

- (i) They show a distinct preference for interactions that are conducive to further interactions.

- (ii) They structure their interactions within a mutually meaningful framework. Children appear to actively interpret the meaning of acts and selectively base their responses on perceived content.
- (iii) They not only prefer interactions that are mutually meaningful, but will choose to render interactions meaningful when thematic consonance is threatened.

We may therefore conclude this section by asserting that analyses of the interactions of the children under study indicate that they can discriminate communicative intent. This concords with other research findings (e.g. McTear, 1979; Keenan, 1973; Keenan and Klein, 1975; Walkerdine, 1982).

(ii) Children's use of thematic categories:

These results justify an examination of the second hypothesis to repeat my argument at the beginning of this section: If children do organize their social environments in a selective and consistent manner, then they must be engaging in mutually meaningful interactions. Thematic consonance should be evidenced in their interactions which implies that the four groups should be using the thematic categories in the same way.

Results

- 1) Frequencies of initiations of all open and closed acts. Below in Table 4.4 are the relative frequencies and proportions of 'open' and 'closed' acts for each group:

Table 4.4
Frequency of 'open' and 'closed' behaviours by group.

Group	Open	Closed
1	3262 (83%)	682 (17%)
2	1398 (83%)	280 (17%)
3	826 (90%)	88 (10%)
4	520 (76%)	163 (24%)

Perusal of the table indicates that all groups express a strong preference for acts that are conducive to further interaction, Group 3 engaging in the highest proportion of open acts and Group 4 the lowest.

2) Thematic consonance by group

Tables 4.5 and 4.6 contain the initiation x response frequencies based on thematic extensiveness for each group for open-open and closed-closed interactions. The thematic sub-categories were collapsed into their respective super-ordinate categories of thematic extensiveness. Development, Static and External as frequencies of occurrence for some combinations of thematic sub-categories were too low to justify individual attention (see Tables 4.1, 4.2, 4.3, 4.4 in the Appendix). The hypothesis was investigated using Kendall's concordance of rankings for open-open ($\chi^2 = 29.2$, $df=8$) and closed-closed ($\chi^2 = 27.1$, $df=8$) behaviours separately. Results were significant ($p \leq .001$) confirming the hypothesis. Thus, we may conclude that the four groups are using the thematic categories in the same way.

Table 4.5
OPEN - OPEN

		RESPONSE		
		Development	Static	External
I N I T I A T I O N	Development	973	306	37
	Static	222	245	64
	External	186	40	30

GROUP 1

I N I T I A T I O N	RESPONSE			
	Development	Static	External	
	Development	414	94	66
	Static	69	86	24
	External	64	12	6

GROUP 2

INITIATION

	RESPONSE		
	Development	Static	External
Development	263	32	37
Static	39	57	12
External	29	4	5

GROUP 3

		RESPONSE		
		Development	Static	External
I N I T I A T I O N	Development	136	26	15
	Static	22	49	12
	External	17	10	4

GROUP 4

Table 4.6
CLOSED - CLOSED
RESPONSE

INITIATION

	Development	Static	External
Development	97	43	17
Static	25	11	5
External	28	9	10

GROUP 1

INITIATION

RESPONSE

	Development	Static	External
Development	41	10	7
Static	14	4	3
External	14	6	3

GROUP 2

INITIATION

RESPONSE

	Development	Static	External
Development	15	1	2
Static	2	0	1
External	5	0	0

GROUP 3

INITIATION

RESPONSE

	Development	Static	External
Development	22	13	7
Static	14	8	2
External	12	0	0

GROUP 4

IV Conclusion

The results of analyses conducted in this chapter indicate that the interaction frequencies addressed in Chapter 3 consist generally of thematically related acts. Walkerdine (1982) argues that an "axis of selection" (page 137) is evident in discursive formats, however results here suggest that selection may be constrained by the communicative necessity of maintaining a semantic relation between individual acts. This is the basis of coherent interactions.

The children upon whom this study is based appear to not only prefer interactions that are conducive to further interactions, they also appear to maintain coherence by (a) interpreting the communicative intent of others and, (b) basing their responses on perceived intent. Moreover, continuity is generally restored when thematic consonance is threatened. An obligation that is implicit - to maintain mutually meaningful interactions - becomes explicit when dissonance occurs. In this way, mutual regulation and control may be operative within interactions and hence, a social structure like the one suggested by the results of sociographic analyses conducted in Chapter 3 (page 99) can emerge.

We have seen that all four groups do appear to be using the thematic sub-categories in the same way, and, as stated above, a social structure based on relationships presupposes mutually meaningful interactions. However, if children do establish a social structure based on the

selective organisation of relationships, then this must be conveyed in the course of their interactions with each other. Addressing this issue will be the task of the following chapters.

Campbell and Fales (1970) have defined communicative competence as the ability to understand utterances which are appropriate to the context in which they are made. Context provides the framework within which individuals interact, defined by the physical (e.g. activity) and social (e.g. degree of familiarity) factors that are inherent in their encounter. Thus, context is a shared experience and is necessarily based on mutual and often implied understanding.

Consider the following interaction:

Edward (1)*, Derrick (1), Hannah (2) and George (2) are at the art table. Hannah (2) has stuck a matchbox into an empty plastic container.

Edward reaches for Hannah's 'construction'.

Hannah pulls it away, saying: "Don't. . . no."

Edward is crying. Hannah shakes the container and says: "See nothing's . . . there's nothing inside it."

Hannah shows Edward the object.

Derrick - Edward: "They're not racing."

George - Edward: "There's nothing in it."

George shows Edward the container.

Derrick - Edward: "It's just like stuff."

* Numbers in brackets following a child's name refer to the order in which the child is mentioned in the text.

CHAPTER 5: EXCLUSION

I Introduction

Campbell and Wales (1970) have defined communicative competence as the ability to understand utterances which are appropriate to the context in which they are made. Context provides the framework within which individuals interact, defined by the physical (e.g. activity) and social (e.g. degree of familiarity) factors that are inherent in their encounter. Thus, context is a shared experience and is necessarily based on mutual and often implied understandings.

Consider the following interaction:

Edward (1)*, Derick (1), Hamish (2) and George (2) are at the art table. Hamish (2) has stuck a matchbox onto an empty plastic container.

Edward reaches for Hamish's 'construction', Hamish pulls it away, saying: "Don't. . . no." Edward is crying. Hamish shakes the container and says: "See nothing's . . . there's nothing inside it."

Hamish shows Edward the object.

Derick - Edward: "They're not teasing."

George - Edward: "There's nothing in it."

George shows Edward the container.

Derick - Edward: "It's just blue stuff."

* Numbers in brackets following a child's name refer to Group to which child belongs.

Edward stops crying, the four children go to the climbing frame together.

This interaction is based on the transmission of mutual understandings. Children are actively interpreting a social situation - i.e. the reasons underlying Edward's distress - and their interpretations of this situation are implicitly conveyed and understood. Thus, they can come together in their attempts to alleviate Edward's distress. Hamish does not say:

"I think Edward is upset because I'm not letting him take my construction."

Rather, this meaning is implied in:

"See nothing's . . . There's nothing inside it."

Moreover, the implicit meaning of this utterance is immediately understood by Derick:

"They're not teasing."

George's remark, in turn, reflects his interpretation of the implied meaning of "teasing":

"There's nothing in it."

Indeed, Derick's remark is interesting in that a) it suggests that he has some form of supposition about the relationship between Hamish and George and, based on this supposition, has assumed George's involvement by virtue of Hamish's. Hamish is solely responsible for the object under discussion and moreover, the argument had occurred between him and Edward.

b) it expresses Derick's interpretation, as a third person, of 'their' intentions.

If we isolate these utterances from their context of occurrence, we lose not only their 'meaning' but the relationships that they reflect too. Abstract George's remark, "There's nothing in it", and it becomes a description of an object rather than an act upon his social environment. Children do act with intended effect upon their social environment. The above example is illustrative of an interest that extends beyond themselves, of an interest in the relationships and feelings of others and their consequent attempts to bring about changes in their social environment - i.e., to alleviate Edward's distress. Acts are not discrete and independent units; they occur not within a void, but within a context.

In this chapter, I will argue that children, in their communications with each other, actively establish and maintain a social context which is expressive of the differential relationships upon which group organization is based. If the social structure is selectively organized then this selective organisation should be expressed in children's interactions.

II Solidarity

If the group does constitute a distinct social unit then its very distinctness necessarily implies the active use of exclusive behaviours. Exclusive behaviours are those which function to deny group membership and thereby

protect group identity. This line of thought logically concludes in the assertion that exclusive behaviours should be selectively distributed in a manner conforming to the proposed structure of social organisation.

In the previous chapter, I suggested that 'closed' behaviours may subsume two functionally distinct forms of social behaviour, i.e., that of rejecting a person, and that of rejecting a theme or an idea (page 133). Consider the two examples below:

(i) rejection of theme or idea

Mary (4), a 'patient', is being taken to hospital on an 'ambulance boat'. (The 'vehicle' consists of an arrangement of large blocks; at the front is a large block with a steering wheel on it.)

Jimmy (2) is the 'driver'. Earlier this same morning, Group 2 children had built this structure and called it a 'boat'. George (2) protests against this changed identity, saying to Jimmy: "This is a boat."

Jimmy doesn't respond. George then says repeatedly to Jimmy: "This is a boat!"

Jimmy: "It's an ambulance boat."

George: "No, it's not."

Jimmy: "Yes it is. Here's the patient."

Jimmy points to Mary. George leaves.

(ii) rejection of person:

Brian (1) and Arthur (1) are on the climbing frame. Linda (3) approaches.

Linda: "I'll be your friend if you let me on."

Brian: "We don't want to be your friend."

Brian - Arthur: "She's a silly girl."

Linda: "Well, I'm still coming on." (rejection of theme)

These two examples illustrate interactions bearing functionally distinct implications. In the first example George is rejecting the identity Jimmy has ascribed to the structure. He does not, however, reject Jimmy, whereas in the second example, Linda herself is explicitly being rejected. Moreover, her response constitutes a rejection of the import of Brian's utterance - i.e., she refuses to go away - rather than a rejection of Brian.

Piaget (1926) approaches this topic within an intra-individualistic rather than a social context. As noted in Chapter 4, acts are ascribed a communicative value on the basis of a consideration of cognitive constraints (page 113). In his functional classification of speech, he delineates the two categories 'Criticism and Derision' and 'Commands, Requests and Threats', describing them as the "socialized language of the child in its non-intellectual aspect" (page 26). Constitutive factors within the child himself circumscribe the relationships in which he participates (Piaget, 1926). Therefore, potential for true interchange is pre-determined by level

of cognitive development. Thus Piaget isolates content from context and considers utterances classified within 'Criticisms and Derision' and 'Commands, Requests and Threats' within an intra-individualistic perspective. Utterances within the category 'Criticism and Derision' reflect a baser side of human nature:

"Their function is not to convey thoughts, but to satisfy non-intellectual instincts such as pugnacity, pride, emulation etc." (page 26)

'Commands, Requests and Threats' are referred to as "language that is bound up with action" (page 42). Interactions between children are rooted in action, in their ongoing activities, rather than in the formation and maintenance of relationships per se:

"The child does not in the first instance communicate with his fellow-beings in order to share thoughts and reflexions; he does so in order to play." (page 27)

Children's statements are not considered within the context of the interaction within which they occurred but within the context of the speaker's cognitive level, i.e., they are abstracted from a relationship and considered in relation to the child himself, indicating a desire to emulate or supersede or an absorption in his own activity. Thus, utterances bearing socially distinct implications receive the same functional classifications. For example, classified within 'Commands, Requests and Threats' are the statements, "Ez, come and see the salamander" and "No, take it away 'cos I want to put on mine" (page 27) though

the former is expressive of an invitation for mutual involvement in an activity and the latter, the converse. Similarly, the utterances "You're not putting it in the middle" (a plate on the table) and "We made that house, it isn't their's" (page 27) are classified as being functionally equivalent and within the category 'Criticism and Derision'. However, the social implications of these two utterances are quite distinct, the former referring to the addressee's activity, the latter to a mutual activity. Moreover, in the first utterance, the child is objecting to a particular action per se - i.e., the addressee is putting the plate in the wrong place (rejection of theme) - whereas in the second utterance, the child is objecting that other children are interfering with their (the speaker and his friend) house though they don't have right of access to it (exclusion). Thus, though both utterances do constitute criticisms, their functions within the relationship are distinct.

Functionally diverse statements are extracted from their context of occurrence and ascribed a common social significance on the basis of constraints inherent in the child's developmental level rather than on the basis of constraints inherent in a relationship. Indeed, this is a necessary consequence of an intra-individualistic approach. Results of analyses in chapters 3 and 4 indicate that children selectively organise their relationships within a mutually meaningful framework. This suggests that constraints in individual action as a function

of relationships are operative. Consider the following example:

Edward (1) is sitting before a steering wheel attached to a large block. He is turning it around, having said he's driving the car to the hospital where Fiona (1) is a "patient". He is repeatedly calling Fiona, exhorting her to join him. Hamish (2) approaches, sits behind Edward and states that he's a "passenger". Edward responds by pushing Hamish away, saying: "It's not a taxi or a bus . . . it's a car."

Edward then explains to Hamish that a car is not a vehicle of public transportation like a bus or a taxi.

Hamish's assumption of the role of 'passenger', though thematically consonant, is not acceptable to Edward. The 'car', being a vehicle of private transportation, is not available for Hamish's use. It is, however, available for Fiona's use.

Within Piaget's classification scheme, Edward's statement to Hamish would be classified within the category 'Demands, Requests and Threats'. Also classified within this category would be his exhortations to Fiona to join him. Though both utterances function as directives, the latter is intended to secure an interaction, the former, conversely, to terminate an interaction. Contexts of occurrence render them functionally distinct

and it is this distinction that determines their separate classifications under the taxonomic system employed here. Thus, Edward's directive to Fiona to join him in his car is classified as an 'inclusive' act (see Chapter 6 page 194) whereas his directive to Hamish not to enter his 'car' is classified as an 'exclusive' act (see page 152). Consideration of context of occurrence indicates that these utterances are selectively applied: Edward is friends with Fiona but not with Hamish (as suggested by sociographic analyses, page 99) and he is actively maintaining this distinction. Differential relationships can only be maintained through differential communications and the signification of these communications can only be ascertained by a consideration of social context in our analyses.

Indeed, if the proposed form of social structure is based on group organisation and differentiation, then children must be engaging in behaviours that maintain this differentiation, i.e., the distinctness of this differentiation necessarily implies the active and selective use of exclusive behaviours. As noted earlier, 'closed' behaviours may subsume behaviours involving 'rejection of theme' and 'rejection of person' (exclusive behaviours). If the groups do constitute distinct social units, then this distinctness should be reflected in the use of these behaviours according to group membership. Exclusive behaviours should be used more in interactions with non-group members than in interactions with group members,

whereas 'reject theme' behaviours should be used more in internal interactions. This hypothesis will be investigated below.

Categories

The following categories of behaviour will be employed to investigate the above hypothesis. (Reliability coefficients are presented in brackets):

A. Exclusion: Rejection of person (.94):

a) Deny access (1.00): refuse integration in activity.

Example:

Mary (4) is in a large box.

Nancy (4) approaches.

Mary: "This is my room. This is my room." Deny access

Nancy enters the box.

Mary: "No, I sleep here." Deny access

Nancy sits down.

Mary: "Nancy! This is my room!" Deny access

Nancy is leaving.

Mary: "This is my room, O.K.?" Deny access

'Deny access' can also be nonverbally expressed, for example, pushing away someone who is attempting inclusion.

It may also be expressed in a more subtle manner:

Fiona (1) and Brian (1) are "doing jobs in the house". The "house" is an arrangement of large blocks. The hospital instruments are tools, e.g. the stethoscope is a hammer. Hamish (2) seeks inclusion in the activity:

Hamish - Fiona: "Need a tool."

Fiona - Hamish: "No, you don't need a tool." Deny access

b) Deny friendship (1.00): statements involving denial of friendship, such as expressions of dislike, refusal to come to each other's 'parties', and explicit denials of friendship.

Example:

Edward breaks Colin's "fire" (bricks piled on top of each other).

Colin: "You're not coming to my party!" Deny friendship

c) Insult (.82): 'Offensive' acts such as telling a child he is 'stupid', making faces, expletives etc.

Example:

Group 1 children are playing on the boxes.

Nancy (4) climbs onto a box:

Arthur - Nancy: "Off!" Deny access

Arthur - Nancy: "You've got a dirty face." Insult

B. Reject Theme (.84):

a) Demand cessation (.90): directives requiring that the child cease engagement in a particular activity.

Example:

George (2) and Jimmy (2) are competing at the dough table over who can make the biggest "man".

Jimmy: "George, I've finished my one."

George: "I've finished my one."

However, George adds more dough to his "man"

and is increasing its size with the rolling pin.

Jimmy: "George, don't make your's the biggest."

Demand
cessation

b) Counteract (.77): denials of actual content of peer's act.

Example:

Linda (3) and Derick (1) are at the climbing frame together.

Derick describes their activity as "gymnastics".

Linda: "No it isn't. No it isn't. Counteract
No it isn't. My teacher tells me
it's not gymnastics at school."

Derick: "You don't go to school. You go Counteract
to nursery."

Results

For the purposes of this analysis, sub-categories were collapsed according to whether or not they involved rejection of theme or rejection of person for the following reasons:

- i) attention to individual sub-categories was not pertinent to the hypothesis under investigation.
- ii) some of the sub-categories are used too infrequently by particular children (e.g. Group 3 doesn't use 'Deny friendship) to merit separate attention.

Table 5.1
Frequency of Initiations of
Reject Person/Theme by Group

GROUP		IDENTITY OF TARGET	
Internal Interactions		External Interactions	
I N I T I A T I O N	91 (.23)	336 (.51)	PERSON
	307 (.77)	327 (.49)	THEME

() column proportions

The results of this analysis are presented in Table 5.1. The hypothesis that 'reject person' (exclusion) behaviours are more likely to occur in external interactions whereas 'reject theme' behaviours are more likely to occur in internal interactions is confirmed ($\chi^2 = 79$, $p < .001$ ^{df=1}). The way in which a disagreement is conducted does appear to be related to the nature of the relationship between the interactants. These results also suggest that consideration of the context within which acts occur can provide information about the way in which children structure their social relationships.

'Exclusion' in the research literature

Exclusion, as an organisational feature of preschool children's relationships, has received scant attention in the research literature. Rubin (1980) notes that "Even among toddlers in the Kibbutz, group membership is closely linked to the exclusion of non-members." Thus, exclusion appears to be a form of behaviour characterizing the relationships of children younger than the children comprising this sample. In an investigation of children's relationships, Corsaro (1981) reports that children are predominantly concerned with

- a) gaining access to ongoing activities and,
- b) resisting access attempts of others into activities once they themselves have achieved inclusion.

Corsaro isolates the following five categories of exclusion:

- i) verbal resistance with no justification
- ii) justification based on arbitrary rules
- iii) ownership claims
- iv) justification with reference to space or number of people involved
- v) denial of friendship.

Ownership claims and justification with reference to space or number of people involved were found to be the most consistently used types of exclusion (46.8 per cent and 17 per cent respectively).

Aspects of Corsaro's methodological approach constrain the significance of his findings:

- i) His sampling units were derived from what he terms "interactive episodes". These were interactions occurring between individuals within ecological (i.e. activity) areas of the nursery. Sampling terminated when children left the area:

" . . . I defined an interactive episode as sequences of behaviour that begin with the acknowledged presence of 2 or more interactants in an ecological area and end with the physical movement of interactants from the area, which terminates the originally initiated activity." (page 212)

Thus, the commencement and termination of an interactive episode may sometimes have been determined by physical location though the children under observation may have

been interacting prior to entering the area, or after leaving the area, or both. Such information can only be obtained by alternative sampling methods - such as focal individual sampling (see Chapter 2 page 42) - and moreover, this information is essential in a study of organizational features inherent in children's relationships. Consider the following example:

Derick (1) and Iain (2) are playing with large blocks. Arthur (1) enters the area,

Arthur: "Derick, we can have our snack."

Derick leaves with Arthur, Iain is alone.

If interactive episode was determined by physical location the interaction between Iain and Derick would have been artificially terminated upon Derick's departure, though their interaction does in fact continue:

There is an empty chair at the snack table.

Derick calls Iain: "Iain, we keep this chair for you."

Iain goes to the snack table, the interaction continues.

Corsaro asserts that children interact in order to gain access to, and participate in, an activity rather than to form relationships per se yet this observation could be an artefact of his sampling methods, not to mention his finding that 51 per cent of the interactive episodes were less than 5 minutes and 32 per cent were less than 10 minutes. The social context within which an interaction occurs is distinct from its physical context.

ii) Corsaro's sample is based on the following two pre-school groups: A morning class of 24 children with an age range of 2 years 11 months to 3 years 11 months and an afternoon class of 26 children with an age range of 3 years 9 months to 4 years 10 months. Corsaro collapses the two groups and thus has a sample with a two year age range that are treated as a homogeneous unit. Moreover, children under four years of age must have dominated his sample. As his data analyses are generally based on averages, interpreting the significance of his findings is problematic. Differences in the social and linguistic skills of preschool children as a function of age have been well documented in the research literature. (e.g. Foot et al, 1979; Shatz and Gelman, 1975). Indeed, length of interaction alone has been found to vary as a function of age in preschool children (e.g. Van Alstyne, 1932).

iii) Videotapes of interactions were coded on a dyadic basis:

"In this coding procedure no child could have more than one social contact with any other particular participant in a given episode."

(page 226)

Thus, interactions involving more than two children are coded in the same way as dyadic interactions. Yet an interaction is not necessarily dyadically based. This is illustrated in the interaction below:

Group 1 children are teasing Nancy at the snack table.

Brian: "She's got smelly crisps."

Colin: "She's got cherry crisps."

Brian: "She's got soggy crisps."

Edward: "We got clean crisps."

Brian: "We got clean crisps."

Colin: "She's got cherry crisps."

Three children were evidently involved, albeit in varying degrees, in the above interaction, not to mention Nancy, the target of mild teasing. Thus, coding individual utterances dyadically would distort the social context within which they occurred.

iv) Corsaro reports that there were no instances in which certain children were consistently accepted or rejected. He does not report whether or not children equally sought access to all interacting groups regardless of group composition or to particular groups. Whether or not the behaviours under study were differentially distributed across the sample is also not addressed. Only the distribution of these behaviours relative to each other is presented. Yet, Corsaro notes that children tend to play with particular peers more than others. Therefore, differential affiliative preferences must have characterized his sample. He argues that children form multiple relationships in order to maximize their chances of involvement in activities. However, the same argument could be made of adults who also have multiple friendships.

Corsaro's argument that children interact with many individuals in order to maximize opportunities for inclusion in activities rather than to form relationships is reminiscent of Piaget's (1926) assertion that "the child

does not in the first instance communicate with his fellow-beings in order to share thoughts and reflexions; he does so in order to play" (page 27). However, Corsaro does not provide any empirical justification for his assertion and, moreover, his methodological approach confines him to a consideration of the distribution of his categories relative to each other rather than their distribution relative to children's relationships, not to mention underlying motivations. Though his results do provide important information about the ways in which children organize their relationships, his approach does not allow him to exclude the possibility that an ongoing activity may be the result of a pre-existing relationship - i.e., children may play together because they like each other - rather than the relationship being the result of the activity. Indeed, results of the above 'Reject theme'/'Reject person' analyses indicate that children do selectively structure their conflicts in a manner that conforms to the organisation of their affiliative preferences such that in interactions with friends, the substantive content of the act per se is rejected whereas in interactions with non-friends, the 'actor' himself is rejected.

Exclusion and Group Size

If children do employ exclusive behaviours to protect their relationships, rather than to protect their inclusion in activities, then we should expect the use of exclusive

to bear some relationship to group size. As Shaw (1971) observes, the potential number of interpersonal relationships between group members necessarily increases with group size. As noted in Chapter 3 (page 107), interactional differences between relationships involving more than two people compared to those involving two people have been reported in the adult research literature (e.g. Cartwright and Zander, 1968; Shaw, 1971). Allen* (1981) writes:

"certain phenomena are possible in groups of 3 or more that are not possible in two-person interactions: for example, coalition, rejecting a deviant, majority pressure." (page 183)

Rubin (1980) makes a similar point:

"A group . . . is a social entity which transcends the level of individual personalities and two-person relationships. . . Groups also pose for the child some of the most acute problems of social life - of inclusion and exclusion, conformity and independence." (page 91)

The above research suggests that dyads will not use exclusive behaviours to the same extent as groups composed of three or more. These speculations lead to the following hypothesis:

Results of the previous analyses suggest that children do use exclusive behaviours to protect their relationships rather than to protect

* There is disagreement in the research literature regarding whether or not a dyad constitutes a 'group'. Allen (1981) and Rubin (1980) do not regard a dyad as a 'group' contrary to Putallaz and Gottman (1981), Shaw (1971) and Hinde (1979). The distinction appears to be purely definitional.

their inclusion in activities. If this were not the case, they would not be using these behaviours differentially according to the identity of the target child. However, the above research findings do suggest that the use of exclusive behaviours will be affected by group size and resultant interactional possibilities. For example, coalition against an 'outsider' is less likely to occur within a dyad than within a larger group. Thus, one would expect Groups 1 and 2 to be making a more rigid distinction than Groups 3 and 4 in their use of 'reject person' behaviours across internal and external interactions.

Results

Table 5.2 contains the relative frequencies of 'reject person' and 'reject theme' behaviours by group size. (Groups were collapsed on the basis of size however Groups 3 and 4 were engaging in these behaviours in the same way as each other as were Groups 1 and 2.) The hypothesis is not confirmed. Examination of the table indicates that in Groups 1 and 2, 79 per cent of total 'reject person' initiations are directed towards non-group members and, similarly, in Groups 3 and 4 76 per cent of initiations are directed towards non-group members. The obvious argument against this latter finding is that it could be merely a result of the fact that 'external targets' comprise a large

Table 5.2
Frequency of Initiations of
'Reject Theme' - 'Reject Person' By Group Size

		Internal Interactions	External Interactions	GROUPS 1 and 2
I N I T I A T I O N	PERSON	71 (.22)	273 (.56)	
	THEME	257 (.78)	218 (.44)	

		Internal Interactions	External Interactions	GROUPS 3 and 4
I N I T I A T I O N S	PERSON	20 (.29)	63 (.36)	
	THEME	50 (.71)	109 (.64)	

() column proportions

number of children however, analyses conducted in Chapter 6 reveal that inclusive behaviours are evenly distributed across internal and external interactions for Groups 3 and 4 (page 201). If number of individuals was the determinative factor then inclusive behaviours should be similarly distributed as exclusive behaviours, however they are inversely related. Thus, it does appear that the distribution of 'reject person' initiations for Groups 3 and 4 reflects selectively structured interactions as it does with the larger Groups 1 and 2. Indeed, this finding is interesting in view of Allen's (1981) and Rubin's (1980) assertions (cited above) that exclusion is a property of larger groups but not of dyads (they do not regard a dyad as a group). The results here suggest that, for this sample of children, exclusion serves to protect relationships within dyads as well as the relationships between larger 'groups' of children.

However, an unexpected observation is that Groups 1 and 2 appear to be making a greater distinction than Groups 3 and 4 in their relative use of 'reject person' and 'reject theme' behaviours, i.e., 'reject person' is used more in external interactions whereas 'reject theme' is used more in internal interaction. Groups 3 and 4 do appear to be making some distinction (i.e., internal: 29 per cent (person) to 71 per cent (theme) - external: 36 per cent (person) to 64 per cent (theme)) though it is obviously not of sufficient magnitude to yield statistical significance. Indeed, significant results were obtained for Groups 1 and 2

($\chi^2 = 93.2$, $p < .001$) ^{$df=1$} but not for Groups 3 and 4 ($\chi^2 = 1.4$, not significant) ^{$df=1$}). Hence, group size appears to exercise an effect in so far as the relative distribution of 'reject person' - 'reject theme' behaviours is concerned but 'reject person' behaviours appear to be an important organizational feature for all groups.

Functional Outcome of Exclusive Behaviour

Results of analyses undertaken thus far suggest that exclusive behaviours are a constituent factor underlying the social organization of this sample of children. Children do appear to be engaging in behaviours that maintain a social structure based on the organisation of affiliative preferences, i.e., they do behave differently with those who are their friends compared to those who are not in a consistent and sustained manner.

Relationships appear to be important to children thus they engage in actions that regulate and maintain a social world of a distinct and differentiated nature. The differential distribution of 'reject theme' and 'reject person' behaviours across internal and external interactions appears to be especially important in the interactions of Groups 1 and 2 though we have seen that Groups 3 and 4 are making some distinction. However 'reject person' (exclusion) behaviours occur more frequently in the external interactions of all groups. These results suggest that restraints in individual actions may be operative as a function of relationships which, in turn,

suggests that these two categories of behaviour may have different functional outcomes, that is to say, they have different effects on an interaction. Consider the following:

Derick (1) and Edward (1) are guards on a train.

They are in the Wendy House making themselves supper before they start to collect tickets:

Brian (1) approaches them saying:

"We have to go to school."

Derick promptly rejects Brian's statement:

"We don't go to school we work on the trains." (Reject theme)

At this point, Brian has two alternatives:

i) he can conform and behave appropriately, i.e., state that he is also a member of the train crew,

ii) not change his behaviour, thus rendering himself ineligible for participation in the activity.

Brian opts for the former alternative.

Let us compare this interaction to the previously mentioned example in which Edward would not allow Hamish to be a 'passenger' in his car on the grounds "it's not a taxi or a bus". Both examples involve rejections initiated by members of Group 1 with the important difference that in one case it is directed towards a friend and, in the other case, to someone who is not a friend. In the first example, Brian (1) made a thematically dissonant remark, however his friend responded by

creating a situation where correction was possible and therefore, subsequent inclusion in the ongoing activity. In contrast, Hamish's remark was thematically consonant but his rejection was based on his identity and thus, the possibility of inclusion was not made available to him.

Restraints in individual action within relationships appear to be determined by:

- (i) who you are (person)
- (ii) what you do or say (theme)

Consideration of these examples suggests that a different type of interaction may be associated with 'reject person' initiations as opposed to 'reject theme' initiations - as they do appear to bear socially different implications. These speculations lead to the following hypothesis:

If exclusion does function to protect intra-group relations, then 'reject person' behaviours should be more likely to lead to a 'closed' (see page 118) response than 'reject theme' behaviours. This should hold regardless of group size.

Results

Table 5.3 presents the distribution of responses to 'reject person' and 'reject theme' initiations. Because the relationship between these categories of behaviour differed by group size, Groups 1 and 2 and Groups 3 and 4 are considered separately here to see if the responses

Table 5.3

Frequency of Responses to 'Reject Theme' and 'Reject Person' by Group Size

		R E S P O N S E		GROUPS 1 and 2
		OPEN	CLOSED	
I N I T I A T I O N	PERSON	<div>●</div> 116 (.36)	203 (.64)	
	THEME	175 (.48)	191 (.52)	

		OPEN	CLOSED	GROUPS 3 and 4
		OPEN	CLOSED	
I N I T I A T I O N	PERSON	15 (.27)	41 (.73)	
	THEME	45 (.45)	55 (.55)	

() row proportions

differed on the same basis. However, the hypothesis is confirmed for both larger and smaller groups. 'Reject person' initiations are more likely to lead to a closed response than 'reject theme' initiations whereas 'reject theme' initiations are more likely to lead to an 'open' response than 'reject person' initiations (Groups 1 and 2, $\chi^2 = 9.1$, $p \leq .005$, $df=1$; Groups 3 and 4, $\chi^2 = 5.03$, $p \leq .025$, $df=1$). Thus, it does appear that exclusion functions to protect intra-group relations.

Closed behaviours do indeed have a disruptive effect on interactions. In the thematic analyses conducted in Chapter 4, a significant relationship was found between type of act initiated (thematic sub-categories) and type of response received (open/closed) for 'open' initiations but not for 'closed' initiations (page 132). The differential responses to 'reject theme' and 'reject person' (exclusion) initiations would seem to account for this result. Further, this finding indicates the extent to which children actively interpret the content of acts and base their response on their interpretations.

Considerations

Trevarthen (1982) writes:

"Human beings neither know nor perceive as isolated individuals." (page 81)

This assertion summarizes the fundamental approach upon which this research endeavour is based. If we consider children's interactions within their context of

occurrence, a social world that is distinct and differentiated emerges, rather than a converse one marked by diffuseness and lack of differentiation. It is this latter 'world' which prevails in traditional cognitive theories of early social development.

Analyses of the distribution of exclusive behaviours and 'reject theme' within a social context indicate that children act upon their social environments with intended effect, the net result a social organization of a defined and distinctive nature that is predicated upon their friendship preferences. Corsaro (1981) looked at the occurrence of specific behaviours within a social context yet considered his results within an intra-individualistic context i.e., children engage in certain behaviours in order to ensure their own inclusion within an activity. Piaget (1926) extracted acts from their social context, considered them within the context of restraints inherent in developmental level and then made assertions about relationships on the basis of analyses conducted within an intra-individualistic framework. I am not by any means trying to negate the significance of factors such as cognitive or linguistic levels, but rather, am endeavouring to argue that, in studying social behaviour, we must necessarily consider the different situations in which different social acts occur since a social act is, by definition, inter-individual. Thus, approaching it from an intra-individualistic perspective is fraught with both heuristic and ontological problems since such an

approach can lead to conclusions based upon the perspective within which the phenomenon was examined rather than upon the actual phenomenon itself. As Ervin-Tripp and Mitchell-Kernan (1977) write:

"Both the interpretation of what is said and rules for choosing among options depend on features of the social context such as setting and activity, and features of the speaker, addressee, and audience." (page 2)

If we look at a social phenomenon in relation to the relationship rather than in relation to the individual, a social structure^{emerges; one} that is made distinct and orderly by the children's own actions.

Pronominal references

~~Terms~~ Terms of address can establish a context based on social contrasts. Consider the following example:

Group 1 children - Derick, Edward and Arthur - return from the snack table to find Group 2 children - George, Hamish and Jimmy - on their 'ship'. Group 1 children protest against this invasion of their territory:

Edward (1): "What are you doing on our ship, huh?"

Hamish (2): "We're making a different ship for you."

Derick (1): "They're breaking our ship."

Group 2 continue engaging in building activity, Group 1 are watching them,

Arthur (1): "We don't like your ship."

Derick (1): "We're going to break it."

(My emphasis)

Exclusion and inclusion complement each other. The appositional use of pronominal references - i.e., the inclusive 'we' or 'our' versus the exclusive 'you', 'your' or 'they' - expresses a social context based on two discrete alignments. Consider the following example:

Karen (3) and Nancy (4) are in the see-saw together. Linda (3) enters a cardboard box beside them and announces:

"Now I can play 'Jack in the Box' with myself because nobody's helping me."

. . . Karen (3) and Nancy (4) continue rocking. . .

Linda (3): "I'm only going to ask Karen in my car. Karen, would you like to come in my car.?"

Karen (3) tells Nancy (4) to stop rocking.

Nancy (4) doesn't.

Linda (3) - Nancy (4): "Stop . . . you're naughty."

Karen (3) screams. Nancy (4) hits Karen (3) says: "Don't scream."

Linda (3) - Karen (3): "Hit her."

Karen (3) enters the 'car' with Linda (3).

Nancy (4) starts knocking the 'car' . . .

In this example we also see a complementary co-occurrence of inclusion and exclusion. An inclusive relationship

is established between Karen and Linda and, simultaneously, an exclusive relationship between Karen and Linda versus Nancy. Linda establishes this particular context in saying: "I'm only going to ask Karen." Within Karen's inclusion is expressed Nancy's exclusion. Thus, a social context based on appositional relationships is established. However, this interaction does express a qualitatively different relationship exists between Karen and Linda compared to the relationships between children comprising Groups 1 and 2 respectively. Linda uses first person singular pronominal references, referring to the 'vehicle' as "my car". Groups 1 and 2, on the other hand, both employ first person plural pronominal references.

Inclusion and exclusion are mutually definitive. One necessarily implies the other. In forming an inclusive relationship with particular individuals, one is ipso facto forming an exclusive relationship with certain other individuals. Pronominal references are important in that they are expressive of types of relationships and thereby, of social context. The examples presented above involve alliances within groups against non-group members. Below is an example of a social context based on an alliance with a non-group member against a group member:

Nancy (4) and Mary (4) are playing together.

Mary: "You a queen and me a princess."

Mary and Nancy then sit before a steering wheel and are turning it around together.

Nancy then yells "Mary!" and 'collapses' on

the floor. Mary attempts to 'revive' her.

Janet (0)* puts a pillow under Nancy's head.

Nancy pushes Janet away.

Mary (4) - Janet (0): "Nancy's dead . . .

C'mon, let's go away." (my emphasis)

Nancy (4) follows Mary (4) and Janet (0) to the see-saw.

Nancy (4) - Janet (0): "Get out!"

Nancy (4) holds the see-saw such that they can't use it.

Nancy (4) - Mary (4): "I was going to come to your party."

Mary (4) - Nancy (4): "You're not my friend."

Janet (0) - Mary (4): "You're my friend."

Mary (4) - Janet (0): "Yes."

Nancy (4) - Mary (4): "I want to come to your party."

. . . Mary doesn't respond.

Nancy (4), crying - Mary (4): "I was your best friend and I was . . . we was princesses."

Janet (0) and Mary (4) leave, Nancy (4) is following them.

In this interaction Mary aligns herself with Janet and this alignment is used to express Nancy's exclusion. For example, in the utterance: "Nancy's still dead. . . C'mon, let's go away", an exclusive third person singular - Nancy is only referred to, not addressed - is followed

* Younger child

by an inclusive first person plural. Nancy, on the other hand, is trying to protect her relationship with Mary through attempts to oust Janet and assert her own relationship with Mary:

"I was your best friend and I was . . . we was princesses."

Mary had, in fact, assigned the role of 'princess' to herself ("You a queen and me a princess") whereas in the above utterance, Nancy transforms it into a mutual identity. This interaction also emphasizes the importance of considering the context within which acts occur. Nancy is very clearly concerned about her relationship with Mary rather than about gaining inclusion in the see-saw activity. Her statements indicate a concern about friendship that extends beyond the immediate interchange which is proposed by many theorists (e.g. Selman, 1981) to constitute the basis of young children's conceptions of friendship (see Chapter 1, pages 25-26). Indeed, the interaction does culminate in a discussion about relationships.

The examples I have discussed suggest that the selective use of pronominal references in 'closed' interactions may serve to establish a social context based on exclusion in that they reflect the establishment of differential relationships. Indeed, Ervin-Tripp and Mitchell-Kernan (1977) write:

"It is clear from the social differentiation in address terms, pronouns, and directives that children systematically must come to

attend the features of age and power and familiarity of addressees. We can assume, therefore, that for a child the 'meaning' of an utterance is not a matter merely of ideational contrasts but an act of social interpretation which has more than a single source of interpretive knowledge as input."

(page 11)

These speculations may be investigated in the form of the following hypothesis:

First person pronouns with reference to a second person (e.g. "I'm not your friend") will be more salient during 'closed' interactions than during 'open' interactions.

Method

All acts involving pronominal references were coded according to whether or not they contained only first person pronouns (I or we) with no reference to a second person or persons or first person pronouns with reference to a second person or persons. Second person plural was coded when more than one person was being addressed.

Results

Frequencies of pronominal references for 'open' and 'closed' interactions are presented in Table 5.4. If we compare 'open' interactions with 'closed' interactions, we notice an increase in the use of first person pronouns with reference to a second person for 'closed' interactions.

Table 5.4

Pronominal References in 'Open' and 'Closed' Contexts by Group

OPEN INTERACTIONS

GROUP	1	2	3	4
SELF, NO OTHER REFERENCE	688 (.81)	246 (.82)	172 (.83)	98 (.82)
SELF, OTHER REFERENCE	163 (.19)	55 (.18)	34 (.17)	21 (.18)

CLOSED INTERACTIONS

GROUP	1	2	3	4
SELF, NO OTHER REFERENCE	80 (.66)	47 (.84)	28 (.76)	21 (.75)
SELF, OTHER REFERENCE	42 (.34)	9 (.16)	9 (.24)	7 (.25)

() column proportions

However, the increase is not of sufficient magnitude to warrant statistical analysis. The increase is most striking for Group 1 interactions and does not obtain for Group 2 interactions. Thus, though there is a trend in the predicted direction, suggesting that the establishment of appositional relationships is used to some extent as a form of rejection they do not appear to be as important a form of exclusion as the behaviours subsumed within the 'reject person' category.

Third person pronominal reference

Group 1 appear to make further use of pronominal reference in their use of third person references in 'closed' interactions. Table 5.5 contains the frequencies of second (singular and plural) and third (singular and plural) person references in 'open' and 'closed' contexts for all groups. An example of an open third person reference is: "Iain's my king"; an example of a 'closed' third person reference is "She's silly". Whereas the relative proportion of third person references (compared to second person references) decreases in closed contexts for Groups 2, 3 and 4, it stays constant across open and closed contexts for Group 1 interactions. Being disagreeable to someone in the third person would seem to constitute a greater insult than directly arguing with him in the second person simply because in the latter case the individual is being addressed whereas in the former case, the implicit insult is that the individual is not even

Table 5.5

Distribution of second and third person
pronominal references

		CLOSED	OPEN
Group 1	2nd	240 (.73)	670 (.72)
	3rd	89 (.27)	263 (.28)
Group 2	2nd	96 (.90)	203 (.75)
	3rd	11 (.10)	69 (.25)
Group 3	2nd	36 (.84)	143 (.70)
	3rd	7 (.16)	62 (.30)
Group 4	2nd	41 (.89)	83 (.76)
	3rd	5 (.11)	26 (.24)

() proportion of second person to third person
references by group for 'open' and 'closed
contexts.

'worth' direct acknowledgement, i.e. his mere presence is being tacitly negated or rejected. The fact that such a sensitive use of pronominal reference occurs at all in this age group is interesting from a purely theoretical point of view since it indicates a degree of awareness of the other (in so far as selectively applied techniques of rejection are concerned) that challenges assumptions of egocentrism.

Conclusion

It is clear that the use of exclusive behaviours does conform to a pattern of social organisation based on the distribution of friendship preferences described in Chapter 3 (page 99). Group size appears to exercise an effect in so far as the relationship between 'reject theme' and 'reject person' (exclusion) is concerned - they are inversely related in the larger groups: 'reject person' behaviours are more likely to occur in external interactions and less likely to occur in internal interactions whereas 'reject theme' behaviours are more likely to occur in internal interactions and less likely to occur in external interactions. ~~Exclusive~~ Exclusive behaviours appear to be a basis of differential relationships in that they function to maintain inter-group differentiation. It should be stressed, however, that this distinction is quantitative. 'Reject person' behaviours do occur in internal interactions but the point to be stressed here is that ^{they are} much more likely to occur in interactions

outside the group. Further the finding that exclusion is more likely to lead to a closed response (than 'reject theme' initiations) emphasizes its exclusive function. It does appear that 'exclusion' protects extant relationships. Children's use of pronominal reference (first person, no other reference versus first person, other reference) in open and closed contexts suggests an awareness of the performative force of pronominal reference within different social contexts, though the results of analyses do indicate that it is not a criterial basis of group differentiation. However, exclusion cannot in itself constitute the sole basis of the organisation of friendships. It establishes boundaries between friends and non-friends. What happens within these boundaries will be the topic of the following chapter.

CHAPTER 6: INCLUSION

Introduction

"In our view it violates both commonsense and the Occam's razor principle to assume, without proof, that children's friendships are based on essentially different mechanisms from those upon which adult friendships are based."

(Duck et al, 1980; page 93)

The results of analyses conducted in the previous chapter suggest that children can establish a distinct social world based on differential relationships that are mutually maintained. This is indeed a prevailing circumstance of the daily life of an adult. The social relationships of the child and those of the adult are presumed to be discontinuous. This approach stems from the primary assumption that the child is not initially social, hence a focus on the individual and how he becomes social. (This view was discussed in Chapter 1.) Early relationships are therefore held to be constrained by developmental processes. Ontogeny is conceived as a process of 'knowing'; knowing is predicated upon internal processes and initial ignorance - i.e., want of knowing - is complete.

'Want of knowing' in an extreme form can be seen in the argument that propinquity is the causative factor

underlying interpersonal contact at the personal level. This view is expressed in studies of early relationships based on interviews with an experimenter (e.g. Selman, 1981; Hayes, 1978; Bigelow, 1977) and on observations in a nursery class (e.g. Corsaro, 1981). Because the young child is egocentric, he is aware of the other as a physical entity but not as a psychological entity. This was discussed in Chapter 1 (page 25). Thus, his interpersonal relationships are necessarily physicalistic, his friend being whomever he happens to be playing with at that moment in time, this, in turn, being determined by proximity. For example, Selman (1981) writes:

"Conceptions of friendship relations are based on thinking which focuses on propinquity and proximity (i.e. physicalistic parameters) to the exclusion of others." (page 250)

Corsaro (1981) presents the following interaction as supportive of Selman's position:

Richard (r), age 3.11, and Barbara (B), age 3.0, are building with blocks while Nancy (N), age 3.1, sits nearby.

R-B: We're playing here by ourselves.

B-R: Just-ah-we friends, right?

R-B: Right.

R-B: Go over there. (Points to a block)

Get that block behind you.

(page 231)

However, we are not informed whether or not Richard and Barbara play together on a regular basis. It is

certainly not clear from this example that their independent actions resulted in their being in the same place at the same time and culminated in their playing together in affirmations of friendship. Indeed, Corsaro notes in the same article (discussed in Chapter 5, pages 156-161) that children tend to play with particular peers more than others, thus suggesting that interactions may be based on mutual attraction, rather than on proximity and consequent involvement in a shared activity.

It is indeed theoretically possible to ascribe a determinative role to proximity in preschool relationships through deductive inferences within the framework of Piagetian theory as follows:

- i) interpersonal contact is rooted in individual action rather than in the formation and development of relationships per se:

"The child does not in the first instance communicate with his fellow-beings in order to share thoughts and reflexions; he does so in order to play." (Piaget, 1926; page 27)

(This point was discussed in greater detail in Chapter 5, page 148)

- ii) the child is not aware of the other as an autonomous subjective entity:

"he supposes . . . that his thought is common to all, since he has not attempted to escape from his own personal point of view."

(Piaget, 1929; page 276)

So, if we accept that interpersonal contact is rooted in individual action and that peers are not perceived as psychological entities, then the 'propinquity argument' becomes axiomatic since the young child will have no intrinsic interest in seeking and establishing relationships with his peers. It is thus possible to place pre-school interpersonal contact within the realm of 'serendipity', a physical parameter becoming the cause of contact rather than the intentional acts of the children themselves, propinquity underlying contact, rather than the children actively and selectively seeking each other's company.

Such theoretical assertions can in themselves be presented as constraints in the study of early relationships:

"Our slow progress in empirically identifying friendship interaction patterns may be partly due to the methodological considerations involved.

First, there is the temporal factor to be considered. Once the child is past the point when a friend is whoever he/she happens to be playing with at the moment, identification of

behavioural patterns requires repeated observations. Friendships are formed . . . over time, with the actors oftentimes not fully aware of what is happening nor cognizant of the markers which denote that a bond has been established or severed. Second, these interactions are not constantly displayed. In the course of a day, children interact toward their friends in much the same manner as they do toward children who are not their friends. As they grow older, their time is so

structured that there are fewer and fewer opportunities to observe their interactions with friends." (Serafica, 1982, page 22, my emphasis)

The theoretical premise that the child's interaction with peers has no meaning beyond the immediate activity is presented by Serafica as a justification for not studying friendship at the preschool level. It thereby functions as a heuristic constraint. Results of analyses conducted thus far suggest that it may not be an actual or psychological constraint.

Selective social organisation necessarily implies that propinquity is a parameter that is regulated by the children themselves rather than the reverse. The socio-metric analyses in Chapter 3 (Table 3.2/^{page 99} indicate clearly that preschool children do have distinct affiliative preferences. The exclusion analyses of Chapter 5 demonstrate that children, regardless of group size, differentially employ exclusive behaviours in a pattern that conforms to the distribution of affiliative preferences revealed in the sociogram. Indeed, Strayer (1980) also found that proximity was related to affiliative organisation in the preschool children he observed. Further, though children may interact in a similar manner with friends and non-friends (as do adults), this should not in itself constitute a research barrier. Affiliative distinctions are not constantly displayed but they are very clearly and explicitly operative.

Children do appear to organise their social world on

the basis of their friendship preferences. Thus, I would argue that children not only make an initial distinction between self and other, but that other is apprehended in a differential and selective manner. The selective use of exclusive behaviours is necessarily based on the ability to make this distinction. If children do make this distinction, then they are not viewing their social world as subjectively undifferentiated. They must be aware of other children as autonomous and subjectively independent of themselves, with separate likes, dislikes, thoughts, emotions, intentions etc. Consider the following:

Jimmy (2) breaks the screwdriver,

Jimmy (2) - Iain (2): "What shall we do?" (my emphasis)

Iain: "It was just an accident, wasn't it?"

Jimmy: "Yes."

(Jimmy tries to hide the object)

Such an interaction is interesting both from a purely theoretical point of view and within the context of the present work. First of all, Jimmy seeks the support of his friend. The consequences of his act become a source of mutual involvement in his use of the pronoun, "we". Solidarity is sought in times of stress. Iain responds to this call for help. His immediate concern is not the broken screwdriver, but Jimmy and his intentions.

This conversation illustrates succinctly an awareness of the subjective autonomy of the other, with thoughts and

intentions that are distinct from one's own. As Shields (1978) writes, "The common or presupposed constitutes a field across which differentiated messages can pass" (page 314). The above interaction also contradicts theoretical expectations of what should have transpired when Jimmy broke the screwdriver. Iain's concern should have been the screwdriver and the fact that it was broken, rather than Jimmy and his intentions. Acts are not judged in terms of the intentions of the actor but rather in terms of external criteria such as parental dictates, "veracity is external to the personality of the subject" (Piaget and Inhelder, 1969; page 126). Thus telling a lie that one got good marks is less naughty than saying one was frightened by a dog as big as a cow because in the first example the mother didn't know it wasn't true whereas in the latter case, nobody ever saw a dog that size. Jimmy's and Iain's act bears situational similarities to the first example in that they were completely alone when the act occurred (if my presence was having an inhibitory effect on the interaction, then Jimmy would not have attempted to hide the object in front of me), yet Iain's concern was Jimmy's intention rather than how to avoid anyone 'finding out'. The act was not part of a story read out by an adult but an act committed by a friend in a shared environment. Thus, it occurred in a meaningful context, indicating clearly not only an awareness of the other person, but an interest in him too that is subjectively, rather than just physically, based.

Indeed, awareness of the other extends to an awareness of their relationships too. This is illustrated in the following interaction:

Iain's (2) father has made an aluminium 'space suit' which is generally worn by boys in Groups 1 and 2. Linda (3) puts the suit on; two younger children are watching her.

Linda interprets their watching her as a desire to wear the suit and tells them:

"You have to ask Iain or Janet."

Janet is Iain's younger sister. She is just under three years old and does not play with Iain or Linda. Moreover, she never wears the suit, it is too big for her. Linda has assumed:

- i) the younger children's intentions in watching her
- ii) Janet's right to determine who wears the suit by virtue of her relationship with Iain.

Inclusion

An argument of selective social organisation implies that children have an awareness of not only their own relationships but of the relationships of others. Children actively establish and maintain a social structure of a distinct nature. Indeed, in using the term 'selective', I am necessarily introducing a teleological

element into children's relationships. This awareness is illustrated in the examples below:

a) awareness of own relationships

Iain (2) - Nancy (4): "This is my necklace.

You're not allowed to touch it."

George (2) - Iain (2): "I am I'm allowed to touch it."

Iain (2) - George (2): "Yes."

We see here in active operation a shared awareness of the 'rights' dictated by a particular type of relationship. Friendship allows an intimate form of contact from which non-friends are excluded.

b) awareness of other children's relationships

Derick (1) - Linda (3): "I'm on your side."

Linda: "No you aren't."

Derick: "Yes."

Linda: "You aren't on my side now."

Derick: "I'm on Karen's." (Karen is Group 3)

Linda: "I'm not on your side."

Linda was not involved in the activity Derick is referring to. He assumed

i) Linda's involvement in the activity by virtue of Karen's

ii) Linda would be on the same side as Karen.

In these texts we can see the children actively communicating their interpretations of their social worlds. They form opinions of others based on their own

relationships, based on the relationships existing between others and, moreover, form assessments of other children's intentions, emotions etc. These examples provide an interesting contradiction to attribution research which argues that young children perceive others in terms of physical characteristics rather than in terms of enduring subjective states (Livesley and Bromley, 1973). (This research is discussed in greater detail in Chapter 7 pages 280-281.) Not only do children indicate an awareness of the relationships of others, they will also express differential degrees of liking for individuals within that relationship:

Arthur (1) - Jimmy (2): "I'm not your friend."

Arthur (1) - Edward (1): "I'm just your friend."

Edward - Arthur: "You only like Iain. You only like Iain, eh?"

Arthur - Edward: "Yes."

This interaction illustrates the following:

- a) differential relationships with non-group members and a shared awareness of these relationships
- b) association of Iain (2) with Jimmy (2), thus indicating an awareness of the relationships existing between other children
- c) though Arthur and Edward like Iain, they still place a distinction between him and themselves.

Thus the above interaction is expressive of an 'inclusive' relationship with Iain and an 'exclusive' relationship with Jimmy, yet both are being 'grouped' together as part of the same separate social sphere. Through the term 'inclusive', I am referring to the nature of the relationship that exists between friends, based on mutual affection and an active involvement in each other's company. However, it is evident from the above texts that the term inclusion will necessarily encompass relationships involving varying degrees of friendship.

Inclusion is the inverse of exclusion. The two terms are mutually contrastive and therein, can be considered mutually definitive. Exclusion can serve to maintain an inclusive relationship, creating an interpersonal division that separates friend from non-friend, e.g. George (2) - Group 1 children: "You don't know what we're doing today." By its essentially contrastive nature, it may strengthen the bond between individuals within an 'us' versus 'them' framework. Sherif and Sherif have made this observation in their study of adolescent male groups (Sherif and Sherif, 1964). Similarly, an inclusive relationship with particular individuals necessarily implies an exclusive relationship with others. Indeed, this is implicit in the term 'best friend'. If we continue this line of thought to its logical conclusion, then inclusion and exclusion should be inversely related. This assertion may be investigated in the form of the following hypothesis:

Inclusive initiations will be employed more in interactions with group members whereas exclusive initiations will be employed more in interactions with non-group members.

Categories

The categories of exclusive behaviours have been described in Chapter 5 (pages 152-54). As stated above, 'inclusive' relationships are based on mutual interest and active involvement in each other's company. Thus, I classified in the category 'Inclusion', acts that involve expressions of interest in the other as a person (rather than in his activity per se) such as asking a child to join one in an activity, or involving oneself in his activity, expressions of friendship or affection and expressions concerning the personal appearance, likes, dislikes etc. of oneself or the other. The rationale underlying this scheme of categorisation is as follows: All of these types of acts indicate a commitment to the other person and ensure the continuity of that relationship in (a) providing assurances that the interaction will be pleasureable; (b) encouraging expectations that the relationship will continue beyond the ongoing interaction. As Hinde (1979) writes, "More usually . . . intimacy breeds intimacy" (page 117). Furthermore, there is a degree of personal investment in initiating these types of acts in that one is necessarily exposing oneself to the possibility of personal rejection. For example, asking

someone to play with you, or joining someone in his activity, leaves you open to rejection in a way that saying "I'm making a train" doesn't. Similarly, taking someone's hand or hugging him, is potentially more threatening than passing him a paintbrush. On this basis, I established the following categories of behaviour as definitive of 'Inclusion'. (In brackets are the reliability coefficients yielded for each sub-category. The mean reliability for 'inclusion' was .86.)

- 1) Integration (.86): acts that establish involvement of self or other in a mutual activity such as invitations or expressions of one's own involvement.

EXAMPLES:

- a) George (2) - Iain (2): "C'mon Iain that's not our ship."
- b) Mary (4) - Nancy (4): "Nancy! Will you come in the see-saw with me?"

This category sometimes requires a certain amount of subjective interpretation in that description of one's activity may be a way of integrating another into one's activity or it may not be. To illustrate, if a child enters the Wendy House and the child already in there says "I'm making our supper", then I would code this utterance as 'integration' because the child has included the other in his description of his activity. In

contrast, a statement such as "I'm making lovely, lovely mud" does not express possibilities for mutual involvement whereas the child's response to this utterance, "Do you want me to help you?" does and thus would also be coded as 'integration'.

- 2) Friendship (.91): expressions of friendship or affection.

EXAMPLES:

- a) Mary (4) - Nancy (4): "You're my friend."
 b) Derick(1) - Arthur (1): "When I'm at school, I won't have you or anyone for my friends."

Friendship can also be nonverbally expressed in hugging or holding hands.

- 3) Feelings (.80): statements about aspects of the person, oneself or the other, involving appearance, likes, etc.

EXAMPLES:

- a) Arthur (1) - Fiona (1): "You like crisps, Fiona?"
 b) Karen (3) - Linda (3): "I like your bracelet, Linda."

Results

Table 6.1 contains the distribution of inclusive and exclusive initiations by group membership of target child. Examination of the table indicates that they are inversely distributed, χ^2 analyses demonstrate that this relationship is significant at the .001 level ($\chi^2 = 128.98$, ^{df=1}).

Table 6.1

Distribution of inclusive and exclusive behaviours by group identity of target.

		GROUP IDENTITY OF TARGET	
		Internal	External
I N I T I A T I O N	INCLUSION	370 (.80)	284 (.46)
	EXCLUSION	91 (.20)	332 (.54)

() column proportions

Thus, the hypothesis is confirmed. Inclusive initiations are more likely to occur in internal interactions whereas exclusive initiations are more likely to occur in external interactions. However, though exclusive initiations are asymmetrically distributed, across internal and external interactions, the distribution of inclusive initiations is less striking. Though children do make more inclusive initiations to group members, they also make a considerable number to non-group members. This result indicates that insofar as initiations are concerned, group differentiation is contrastively based through the initiation of exclusive behaviours.

Inclusion and Group Size

In the previous chapter, I argued that group size exercised a determinative influence on the relationship between 'reject theme' and 'reject person' (exclusion) initiations as a function of interactional possibilities it dictates. For example, coalition against an outsider is less likely to occur within a dyad than within a group of four. Results indicated that the relationship was significant in the interactions of Groups 1 and 2 ('reject theme' initiations were more likely to occur in internal interactions whereas 'reject person' initiations, i.e. exclusion, were more likely to occur in external interactions) but not in the interactions of Groups 3 and 4, though they were in the predicted direction. However, exclusion appears to be an important regulative factor

underlying social organization regardless of group size. If group size is a determinate factor in children's relationships, then the distribution of inclusive initiations to internal and external targets should also vary as a function of group size since a dyad has fewer internal interactional possibilities than a larger group. It stands to reason that Groups 3 and 4 will initiate more inclusive acts to non-group members solely by virtue of interactional limitations inherent in a dyad. For example, activities such as fantasy play have a breadth that cannot be realized within the dyad alone, e.g., role differentiation. In a larger group, several roles can be assumed in contrast to the maximum of two within the dyad. These speculations lead to the following hypotheses:

- 1) The initiation of inclusive behaviours will be more evenly distributed across the internal and external interactions of Groups 3 and 4. The interactions of Groups 1 and 2 will be characterized by a more uneven distribution of inclusive initiations, inclusive initiations occurring more frequently in internal interactions.
- 2) From the above follows the hypothesis that inclusive and exclusive initiations will be more inversely related in the interactions of Groups 1 and 2 than in the interactions of Groups 3 and 4.

Table 6.2
Distribution of Inclusive and Exclusive Behaviours by Group Identity of Target: Effects of Group Size

GROUPS		GROUP IDENTITY OF TARGET	
		Internal	External
I N I T I A T I O N	INCLUSION	303 (.81)	218 (.45)
	EXCLUSION	71 (.19)	269 (.55)

GROUPS		GROUP IDENTITY OF TARGET	
		Internal	External
I N I T I A T I O N	INCLUSION	67 (.77)	66 (.51)
	EXCLUSION	20 (.23)	63 (.49)

() column proportions

Results:

The distributions of inclusive and exclusive initiations by group size are presented in Table 6.2. Examination of the tables indicates that the first hypothesis is confirmed. Inclusive initiations are more evenly distributed in the interactions of Groups 3 and 4 and more concentrated in the internal interactions of Groups 1 and 2. However, Groups 1 and 2 do make a considerable number of inclusive initiations to children outwith their immediate social sphere: 58 per cent of total initiations occur in internal interactions whereas 42 per cent occur in external interactions. The results are especially interesting insofar as Groups 3 and 4 are concerned as their initiations of inclusive acts are equally divided between internal and external targets.

In view of the small sample of females in this study I am reluctant to ascribe any determinative role to sex differences (there is also a female in Group 1), however, these findings do concord with other research findings on female preschool children's pattern of relationships. Rubin (1980, page 92) notes that females tend to form "networks of intimate friendships" whereas boys tend to form larger groups. Rubin et al (1976) also report this difference. As stated above, the result of these analyses in view of interactional limitations within a dyad. However, the high frequency of external inclusive initiations for Groups 1 and 2 indicate that they are not a constitutive basis of social organisation for this sample of children.

The second hypothesis also receives confirmation. Inclusive and exclusive initiations are inversely related however this relationship achieves significance at the .001 level for all groups of children ($\chi^2 = 116.35$, $df=1$ and $\chi^2 = 14.67$, $df=1$ in Groups 1 and 2 and Groups 3 and 4 respectively). These results further indicate that in so far as initiations are concerned, group differentiation is contrastively based on the use of exclusive behaviours. Inclusive initiations do not in themselves appear to be a determinative factor underlying social organisation. Thus, I would assert that children are actively showing a friendly interest in their peers, but maintain a special relationship with particular individuals. Through exclusive initiations, they exclude other children from this special relationship. Commitment to particular individuals does not preclude relationships with others. The pattern of initiation of exclusive behaviours ensures, however, that this commitment is maintained.

Functional outcome of inclusive initiations

We have seen that inclusive initiations are clearly not in themselves a constitutive basis of social organisation. However, the responses to these initiations may provide such a basis. In the discussion above concerning the definition of 'inclusion', I asserted that a degree of personal investment is inherent in an inclusive initiation that is not present in mere descriptions of activities. Asking someone to play with you, or telling him that he is

your friend, involves a greater degree of personal commitment in the other person than does telling him that you're painting a bonfire. In expressing a relationship with a particular person, one is necessarily exposing oneself to the possibility of personal rejection. If this is indeed the case, then one would expect inclusive initiations to be responded to differentially across internal and external interactions. These questions can be answered through investigation of the hypotheses below:

- 1) Initiations concerning descriptions of activity are less likely to receive a closed response than inclusive initiations.
- 2) Children respond more frequently to the inclusive initiations of group members than non-group members.
- 3) Group members are more likely to receive an 'open' response to inclusive initiations. Conversely, non-group members are more likely to receive a 'closed' response to inclusive initiations.

Categories

The classificatory basis of 'Inclusion' has been described above (pages 195-96).

Activity description (.90): Descriptions of what one is doing or of what the other person doing.

EXAMPLES:

Karen (3) - Linda (3): "Every time I come here I paint a picture."

Mary (4) - Nancy (4): "I'm going to make a crispie."

Results

1) Inclusive and description of activity initiations:

Results of analyses are presented in Table 6.3. The hypothesis is confirmed, inclusive initiations are more likely to receive a closed response than activity description initiations, this relationship is significant at the .001 level ($\chi^2 = 18.28$, $df=1$). However, the distribution of inclusive initiations indicates that the predominant response is an open one.

2) Frequency of response to inclusive initiations by group identity of target:

The distributions of responses for Groups 1 and 2 and Groups 3 and 4 are presented in Table 6.4. Responses to inclusive initiations are more likely to occur in internal interactions than in external interactions. This result holds for both groups (Groups 1 and 2: $\chi^2 = 26.54$, $df=1$, $p < .001$; Groups 3 and 4, $\chi^2 = 6.85$, $df=1$, $p < .01$).

3) Distribution of open and closed responses to inclusive initiations by group identity of target. The distribution of open and closed responses for internal and external interactions is presented in Table 6.5. Results confirm the hypothesis: Inclusive initiations are more likely to receive a 'closed' response when directed towards an external target and an 'open' response when directed towards an internal target.

Table 6.3
Distribution of Open and Closed Responses to Inclusive and 'Activity Description' Initiations

		Response	
		Open	Closed
Inclusive Initiations		365 (.85)	63 (.15)
Activity Description Initiations		704 (.93)	52 (.07)

() row proportions

Table 6.4
Frequency of Responses to Inclusive Initiations
by Group Identity of Target

	Total Initiations	Total Responses
INTERNAL	303	261 (.86)
EXTERNAL	218	85 (.39)

Groups 3 and 4:

	Total Initiations	Total Responses
INTERNAL	67	57 (.85)
EXTERNAL	66	25 (.38)

() proportion of responses to internal
and external initiations

Table 6.5
*Distribution of Open and Closed Responses to
 Inclusive Initiations by Group Identity of Target*
 Response

		OPEN	CLOSED
I N I T I A T I O N S	INTERNAL	283 (.89)	35 (.11)
	EXTERNAL	82 (.75)	28 (.25)

() row proportions

an internal target. This finding is significant at the .001 level ($\chi^2 = 12.46$)^{df=1}. The interactions of Groups 1 and 2 and Groups 3 and 4 are considered together as the results of analyses of frequency of response (Hypothesis 2) indicate that response to inclusive initiations is an important factor in group differentiation for all groups. If this is the case, then responses in internal interactions should be more conducive to a continuation of the interaction (i.e. 'open') than in external interactions.

Consideration of results:

Rubin (1980) writes:

"In nursery school . . . inclusion and exclusion are constant themes of social life. It is through the continuing negotiation of who is 'in' and who is 'out' that children establish and maintain group boundaries." (page 94)

The results of analyses in this chapter, and in the previous one, indicate that this is a complex process. First of all, negotiation of who is 'in' and who is 'out' is selectively determined by individual identity. This selectivity is stable and enduring over a five month period for the sample of children under study. Moreover, negotiation of who is 'out' (exclusion) appears to be a more straightforward process than negotiation of who is 'in' (inclusion).

On the basis of results of analyses, we may conclude with the following remarks on inclusive behaviours:

- a) contrary to exclusive initiations, inclusive initiations do not in themselves appear to be a constitutive factor underlying social organisation. Children make a large number of inclusive initiations to both group and non-group members though we have clearly seen that they are making a distinction between these individuals;
- b) however, children do seem to be 'aware' of the interpersonal implications of inclusive initiations, i.e., that they are intrinsically expressive of relationships, or a desire for mutual involvement, in a way that mere description of activities are not. Thus, the former are more likely to receive a closed response than the latter, probably because they require a degree of personal involvement that an interactant isn't necessarily willing to meet.
- c) the distribution of responses to inclusive initiations do conform to the proposed structure of social organisation, both qualitatively and quantitatively. Inclusive initiations within internal interactions are not only more likely to receive a response, that response is also more likely to be open. In contrast, inclusive initiations within external interactions are less likely to receive a response and that response is more likely to be closed than in internal interactions.

At the beginning of this chapter, I discussed the thesis that propinquity underlies interpersonal contact in preschool children (e.g. Selman, 1981). The results of the inclusion analyses further vindicate a rejection of this argument in favour of an inverse one, i.e., that propinquity is a parameter that is regulated by the children themselves. In so far as their behaviour is concerned, children appear to be not only apprehending the distinction between self and other, but actively maintaining differential relationships. The results of the inclusion and exclusion analyses are illustrative of this.

The results of these analyses further illustrate the inadequacy of an intra-individualistic approach to children's relationships. The 'propinquity argument' is theoretically, rather than empirically, derived, reflecting theoretical assumptions about the constraints in interpersonal contact dictated by cognitive level, i.e. level of 'knowing'. Youniss (1978, page 208) writes that "when it is asked how the other person affects the child, one has to look at the child's mediating activity", yet the point at which 'Actor' and 'Thinker' converge has not been elucidated. Certainly, it does not appear that the latter can be considered in isolation of the former. The results of the inclusion analyses do support previous assertions that children can discriminate communicative intent and that the way they respond to the import of an act is determined by their relationship with that particular individual. Thus, it would appear that in

investigations of 'how the other person affects the child', a study of both of them, and of what is occurring between them, is essential.

Walkerdine (1982) writes:

"The point has been pertinently made by many researchers that children are neither 'abstract epistemic subjects' nor 'ideal speaker-hearers', but grow up in real contexts, facing real problems and so on."

(page 129)

Thus, we return to one of the central arguments of this research endeavour: A consideration of social context is a necessary prerequisite in the study of children's relationships. Children's social behaviours cannot be extracted from their context of occurrence and adequately understood. A consideration of social behaviours within their social context indicates that children are actively maintaining a social structure that reflects their friendship preferences. Results of analyses in Chapter 4 indicate that interactions occur within a mutually meaningful framework. Children do act upon their social world with intended effect yet the meaning underlying these acts cannot be gleaned if they are considered in isolation of each other.

Inclusion in the research literature:

The terms 'inclusion' and 'exclusion' are used in the research literature as descriptive concepts of group interactions. Shaw (1971) provides the following definition of 'inclusion':

"Inclusion refers to the need for togetherness, the need to associate with others." (page 30)

McDavid and Harari (1968) define 'cohesiveness' as follows:

"A suitable definition of cohesiveness is that it is the 'resultant of all forces acting on all members to remain in the group' (Cartwright and Zander, 1960, p. 64). The specific dimensions that might contribute to this resultant include such factors as the attraction of individual members to one another, the attraction of individual members to the activities and functions of the group, and even the extent to which the individual is attracted to the group as a means of satisfying his own personal needs. Thus, cohesiveness is a general term for a variety of specific dimensions of individual attraction to a group." (page 293)

McDavid and Harari concede in the following paragraph that cohesiveness is a "multidimensional concept that is difficult to define".

Group interactions are obviously based on relationships yet the 'relationship' is a concept that can elude attempts to render it empirically tangible, i.e., quantifiable. Definitions beg the need for further definitions and thus research on friendships often culminates contrastively in recursions to the individual, his needs, interests, motivations etc. This is evidenced in the above-cited definitions of 'inclusion' and 'cohesiveness'. Shaw (1971, page 85) cites research isolating factors such as physical attractiveness and similarity (e.g. attitudinal, economic, personality) that

presumably constitute determinants of interpersonal attraction. Similarly, Asher, Oden and Gottman (1977), in a consideration of children's friendships, cite research demonstrating that name, physical appearance, race, and sex are important determinants of peer acceptance. However, our knowledge of friendship per se is limited:

"Familiarity and friendship are not the same thing. Does the social behaviour of children differ from their behaviour with non-friends? The evidence is scattered and thin." (Hartup, 1978; page 161)

Gottman and Parkhurst (1980) similarly comment on the dearth of research in this area:

"Given this renewed interest in peer relationships and friendship, it is remarkable how little descriptive research has been conducted to create a data base for generating hypotheses and constructing theories about the processes of friendship and acquaintanceship." (page 199)

Throughout this work I have been arguing that the literature has been dominated by an intra-individualistic approach to early social relationships. Relationships have been examined within the context of ascribed competence levels (e.g. Lieberman, 1975), cognitive skills (e.g. Rubin, 1976) and popularity (e.g. Charlesworth and et al, Hartup/ 1967). Theoretical findings from this type of research spawned further research involving coaching 'socially isolated' children in friendship skills (discussed in Chapter 1, page 8 and in Chapter 3, pages 83-6)

based upon the conception of a theoretical ideal who is competent, popular and engages in group activities, preferably of a symbolic nature.

However, social isolation intervention programs are based on dubious premises in that it is not really known what differentiates the popular from the unpopular but methodological goals are to make the unpopular more like the popular. Why some children are viewed as 'popular' and others as 'unpopular' is not really known, perhaps because researchers have tended to seek causation and explanation within quantitative emission of behaviour of the individual rather than within the interactions between individuals (which presumably culminated in children forming certain opinions or feelings about each other, the result being that some children are popular and others less so:

"The popular children did not behave very differently from isolated children when comparing the latter's pre-intervention play session data with data from the former one's play session." (Oden and Asher, 1977; page 505)

Popularity is "liking by general consensus (Duck et al, 1980; page 94) rather than a property intrinsic to the individual. (Indeed, this is evident even from a strictly etymological perspective. A 'pure' definition of 'popular' is "of the people" (Chambers 20th century Dictionary, 1972), derived from the Latin word 'populus', the people). Moreover, it is not an observable phenomenon. A relationship or interaction is based on a synthesis of

actions (verbal and nonverbal), expressions, emotions, thoughts etc. It is not an additive result or sum total of 'behavioural units'. Thus, reductionistic attempts at explaining a relationship in terms of its so-called constituent parts - i.e. actions of the individual - are unsound, both from a methodological and a definitional point of view.

Putallaz and Gottman (1981) "dichotomized" (page 132) children into two groups, 'popular' and 'unpopular' on the basis of sociometric peer nominations. Ten popular and ten unpopular dyads were formed. Each dyad was observed playing in the research trailer and then a third child, belonging either to the popular or unpopular group, was introduced into the experimental situation and ensuing interactions were observed. Thus, the researchers were able to observe unpopular dyads with popular children, popular dyads with unpopular children, in addition to the dyads interacting with their sociometric counterparts. Popular dyads were found to engage in more agreeable interactions, characterized by less squabbling and arguments, than interactions between unpopular dyads. Gottman and Putallaz (1981) thus assert:

"dyadic interactional style creates two distinct membership groups that are identifiable by sociometric nomination technique." (page 144)

Popular children were more successful at gaining entry into ongoing dyadic interactions of children belonging to

either group whereas unpopular children were more likely to be rejected, regardless of group composition of the dyad. Their response hierarchy was organised in such a way that the probability of being ignored was maximized. Moreover, when unpopular children attempted to enter their own membership group, this response organisation was likely to lead to rejection. Putallaz and Gottman liken the behaviour of unpopular children to that of newcomers. For example, they were silent for longer periods of time and avoided attracting attention to themselves.

In this study, children were grouped together not on the basis of their relationships with each other but, rather, on the basis of criteria determined by the researchers, the dyads "homogeneous by sex and sociometric status" the entry child of "varying sociometric status" (page 132). Thus, we do not know whether or not the children assigned to the groups and to the various experimental conditions played with each other outside the experimental context. Moreover, the interactions occurred in a research trailer with a set activity (a word game) and therefore, may not have revealed the children's day-to-day interests, activity preferences, friendships etc., factors which are of crucial importance in an investigation of early relationships.

Though Putallaz and Gottman (1981) have succinctly demonstrated that the two groups do exhibit distinct behavioural differences, we do not know how these differences are operative in the day-to-day existence of

these children. Do the unpopular children behave like newcomers with their friends? It is possible that some children may have been intimidated by the experimental situation itself. We do not know if the behaviours observed reflect two different ways of dealing with a bizarre social situation, i.e., engaging in a prescribed activity in a research trailer with children one may not normally play with; difficulties posed by the experimental situation itself may be increased for children who enter the trailer and encounter an ongoing interaction and are obliged to enter it. The way a child deals with this situation may indeed be reflective of a particular behavioural style, but, the social implications of that style can only really be assessed when viewed in its 'natural' context of occurrence, i.e., in the child's own social environment.

Putallaz and Gottman (1981) assert that the negative interactional style of the unpopular children causes them to associate with each other because the more agreeable children ^{will not interact with them}, in other words, friendship by default. Popularity is thus assumed to be a regulative factor inherent in children's social behaviours, the existence of the unpopular group definitionally predicated on the existence of the theoretical ideal, the popular group. The researchers discuss intervention programs, designed to make the unpopular more like the popular. Whilst some children may experience distress over their social predicament, we cannot assume that all are there by virtue

of some form of social inadequacy. This point was discussed in greater detail in Chapter 3.

Manning (1978) has demonstrated that encapsulating children within 'polar ends' of what is deemed to be a continuous or unitary dimension can be misleading. In a study of 'hostility', she found that its expression varied according to contextual conditions (activity/non-activity) and motivational conditions (provoked/unprovoked). This research emphasizes the importance, both theoretically and clinically, of a consideration of the contextual conditions in which behaviours occur in a study of children's relationships. Other research also discussed in Chapter 3 demonstrates clearly that children have distinct interactional and activity styles (e.g. Montagner et al, 1974; Maxwell, 1983; Coates et al, 1975). Thus the imposition of a unitary dimension with implicit assumptions of homogeneity may not be justified. Just as adults in their relationships constitute a heterogeneous group, heterogeneity can also characterize the relationships of children.

Nursery environment:

Different activities, interests etc. necessarily involve different interactional possibilities. These possibilities can be realized in an environment where children choose what they want to do and with whom they want to play. However, interactional possibilities are necessarily constrained in ~~contrived~~ settings that expect

children to engage in a particular activity with particular individuals, as in the Putallaz and Gottman (1981) study described above. We cannot expect the same type of interaction to occur between children who are painting alongside each other compared to those who are engaged in mutual fantasy in the Wendy House. Shure (1963) has noted that interactions occurring in the doll house are more complex, Charlesworth and Hartup (1967) have made similar observations of dramatic play, and moreover that play with a single child is more likely to occur in block and game areas, and parallel play is most likely in art and book locations.

The role of nursery activities in providing different opportunities for different types of social involvement has been described by Cook-Gumperez and Corsaro (1977):

"Nursery school itself provides a collection of physical-environmental locations, each having a specifically socially-defined character and providing different possibilities for social interaction." (pages 411-412)

They assert that the "socially-defined character" of these different areas is determined by the following two factors:

i) conventionalized expectations:

the shared body of knowledge concerning roles (e.g. mother, father, baby) and the behavioural expectations associated with these roles

ii) accustomed expectations:

knowledge of the kind of activities the different spatial areas are used for.

These expectations jointly determine the communicative activities and strategies of children in different areas of the nursery. Thus we return once more to one of the central arguments of the present work. A consideration of context is essential in a study of children's relationships. Cook-Gumperz and Corsaro observed interactions in the playhouse, the sandbox and the work tables. Their findings in each area are presented below:

1) The playhouse

Children enter the playhouse with accustomed expectations that role play occurs in this area and use conventionalized expectations, e.g. family role play, to structure their interactions. Appropriate roles will be allocated that conform to the dictates of family interaction, i.e., appropriate role and status differentiation. Thus, the nature of interactions occurring in this area is, to a large extent, pre-determined by the very nature of the area itself.

2) The sandbox

This area is less clearly pre-defined than the playhouse. The specific content of activities will therefore be generated to a greater extent by the children themselves. Thus, children will not enter this area with clearly defined accustomed expectations and conventionalized expectations emerge as a function of the activity

they engage in, e.g., racing car drivers vs. construction workers. Moreover, the structure of the activity is dependent on interactants progressively developing each other's ideas:

"There are no suggestions offered regarding a plan for action, rather the children rely on responses of the interactive partners to signify that they are playing together and must fit into the interaction with appropriate responses when necessary. Appropriateness is, in this case, context-bound and spontaneous in that children build the interaction by plugging into and expanding upon the contributions of their interactive partners." (page 423)

Children presented more verbal descriptions of their behaviour in this particular area. This facilitates an interaction that is structured by the children themselves rather than by the actual area (as in the playhouse), thereby informing peers of what is happening and providing possibilities for thematic development.

3) Work tables

This area is marked by the continual presence of teachers and their active involvement in the children's activities:

"We repeatedly observed teacher (adult) control of the nature, flow and direction of the interaction in this area." (page 423)

Thus interactions between peers were more limited in this area than in the playhouse or sandbox. The majority of interactions occurred within a teacher-

child dyad, the teacher controlling the interaction. Shields (1978) makes a similar observation in her study of the communicative skills of preschool children:

"Where there was an adult in charge of the interactional sequence, she usually played a highly organising function in distributing the interactional turns." (page 321)

Cook-Gumperz and Corsaro comment that the minimal peer interaction in this area results from children's accustomed expectations associated with this particular area plus the presence and interactive behaviour of teachers. Other researchers have also noted the inhibitory effect of adults on peer interaction. In an investigation of "language styles" in preschool children, Michell (1982) writes:

"Long stretches of talk were not common, although some children did manage to say quite a lot in some free play contexts when no adult was present." (page 22)

Thus, social context and physical context do appear to exercise a determinative influence on peer interaction, and moreover, children structure their interactions to meet the interactive demands implicit within particular contexts. Cook-Gumperz and Corsaro conclude their study with the observation that children do actively structure their interactions:

"The direct study of spontaneous peer interaction within a nursery school reveals the

communicative strategies children employ to achieve social order in their daily lives. We found that specific properties of social context are part of the information children make note of and utilize in combination with conventionalized expectations to create cultural and normative sense throughout the course of interactive episodes." (page 431)

Piaget (1926) describes the class where he collected his observations as follows:

"In the class where our two subjects were observed the scholars draw or make whatever they like; they model and play at games of arithmetic and reading etc." (page 5)

Piaget's use of the term 'scholars' does reflect fundamental expectations about the nature of child development and the role of the nursery in facilitating this development. The nursery serves an educational function and social interaction is a by-product rather than a goal in itself; therefore, it is considered within the framework of this educationally-oriented context. Individual performance is stressed by the very nature of the context itself. In noting that children did not engage in sustained contact with each other till around eight years of age, Piaget writes:

"These stages of social development naturally concern only the child's intellectual activity (drawings, constructive games, arithmetic etc.) It goes without saying that in outdoor games the problem is a completely different one; but these games touch only on a tiny portion of the thought and language of the child." (page 42)

Because the nursery where Piaget conducted his observations was based on individual activity, it is most probable that children would have been starting and completing their respective activities at different times, not to mention the compounding factor of variations in duration of the activities themselves. This will necessarily affect the type of contact children have with each other both quantitatively and qualitatively. Piaget argues that the children's tendency to talk about their own activities is rooted in egocentrism, and the constraints it imposed upon social interaction, but in a context that is based upon individual activity, this would seem to be a natural outcome, i.e., their conversations reflect the context within which they are interacting. The child's activity thus may provide a 'communicative bridge' between himself and the children working alongside him.

Piaget presents the following as an example of 'monologue' (pages 6-7):

Pie (to Ez who is drawing a tram-car with carriages in tow): "But the trams that are hooked on behind don't have any flags."

(No answer)

Pie (talking about his tram): "They don't have any carriages hooked on."

(He was addressing no one in particular. No one answers him.)

Pie (to Bea): "'T'sa tram that hasn't got no carriages."

(No answer)

Pie (to Hei): "This tram hasn't got no carriages,
 Hei, look, it isn't red, d'you see."
 (No answer)

In considering the above text, Piaget writes:

"Here, then, is a first category which should be singled out, and which in future we shall designate as monologue. When Pie says to Hei or Bea: "'T'sa tram . . . etc." . . . or "this tram . . . etc." . . . he seems on this occasion to want to make himself understood; but on closer examination it will be seen that he cares very little who is listening to him (he turns from Bea to Hei to say exactly the same thing) and, furthermore, that he does not care whether the person he addresses has really heard him or not." (page 8, my emphasis)

It is possible to interpret the same text in an alternative manner: Pie may have repeated himself to different children simply because he was not successful at eliciting a response and wanted to talk to someone, i.e. he does care whether or not he has been heard. Piaget's approach to this text is wholly intra-individualistic in that he does not consider the behaviour of the child to whom the statement was directed. Thus Pie's repetition of his statement is viewed as being determined by internal factors, i.e., cognitive level, rather than external factors, i.e., the other children didn't answer him. Though Piaget argues that Pie doesn't care whether or not he has been heard, he fails to consider the behaviour of the 'listener'.

An environment which is based on individual performance may not only result in interactions based on individual activity but also, the sustained presence of adults. As stated above, the emphasis of the environment is education of the individual child (e.g. "spontaneous work provided by the educational games of the Maison des Petits" (page 381/. ^{my emphasis} Vygotsky (1962) criticizes Piaget for failing to take due account of the determinative effect of environmental contingencies on behaviour:

"The developmental uniformities established by Piaget apply to the given milieu, under the conditions of Piaget's study. They are not laws of nature but are historically and socially determined. Piaget has already been criticized by Stern for his failure to take sufficiently into account the importance of the social situation and milieu. Whether the child's talk is more egocentric or more social depends not only on his age but also on the surrounding conditions." (page 23)

Cook-Gumperz and Corsaro (1977) have demonstrated that children's interactions are affected by not only the nature of the activity but also the presence of adults. Piaget writes:

"as we have taken down in its entirety the context of our two subjects' conversations, especially when it was addressed to an adult, it will be quite easy to eliminate from our statistics all that is not spontaneous talk on the part of the children, i.e., all that may have been said in answer to questions that were put to them." (page 6)

As discussed above, research indicates that adult presence appears to have an inhibitory effect on peer interaction (e.g. Michell, 1982) and adult-child interactions tend to be organised by the adult (e.g. Shields, 1978). Thus, even if 'didactic' texts are removed from statistical analyses, the problems posed by the presence of adults, and its effects on peer interaction, still remain.

Research has indicated that the nature of the class environment - i.e., educational or Montessori programs versus a less structured nursery school - does exercise differential effects on the social orientation of the children. Dreyer and Rigler (1969) report the following differences in the performances of nursery school and Montessori children on various cognitive tasks:

- i) on nonverbal measures of creativity (Picture Construction Test), nursery children gained higher scores.
- ii) Montessori children used more physical characteristics to describe commonplace objects whereas nursery school children used more functional terms, (using the Verbal Encoding Subtest of Illinois Test of Psycholinguistic Abilities).
- iii) the free drawings of Montessori children include people significantly less often than the free drawings of nursery school children and geometric forms significantly

more often than nursery school children.

Indeed, Piaget (1926) makes a similar observation of his subjects at 'Maison des Petits':

"the children of the Maison des Petits deal in their drawings and free compositions with animals, physical objects (stars, sky, rain etc.), with machines and manufactured objects (trains, motors, boats, horses, bicycles etc.)." (page 30)

iv) during the administration of the Children's Embedded Figure Test, the two groups did not differ in mean achievement scores however, Montessori children were found to be more task-oriented, completing the task more quickly than nursery children who used the opportunity to become socially involved with the experimenter.

On the basis of these findings, Dreyer and Rigler conclude:

"The study . . . does support the notion that differing preschool educational environments yield different outcomes. Montessori children responded to the emphasis in their program on the physical world and on the definition of school as a place of work.* Nursery school children responded to the social emphasis and opportunity for spontaneous expression of feeling." (page 415)

The observations on which this thesis is based were collected in the less structured environment of a nursery whereas the structure of the 'Maison des Petits' conforms

* Indeed, Piaget frequently uses the word 'work' to refer to the children's activities at the Maison des Petits.

to that of a Montessori program. In the former, children could engage in a variety of activities containing the potential for either individual or collective activity or both. Imposed structure was minimal in so far as the children's use of any particular area was concerned (see Chapter 2, page 39). Thus, the social potential of any activity was realized through personal choice. On the other hand, we have seen that at the 'Maison des Petits', emphasis was placed on individual activity of a specified nature. Though nursery environment does certainly seem to exercise a pervasive effect on children's interactions, the results of analyses conducted here on 'inclusion' and 'exclusion' suggest that interactions are also affected by social contingencies inherent in relationships (i.e., internal versus external interactions). Hence, the relation between nursery environment and children's relationships would seem to be worthy of attention. This will be addressed below.

Social organisation and the environment

The research we have been reviewing illustrates clearly that the child and his environment are not separate and discrete. The child interacts within a framework in which social and environmental contingencies are at play. Dreyer's and Rigler's (1969) research suggests that nursery structure per se exercises an influence on social orientation. Coates' and Lord's (1975) research indicates that the type of activities

engaged in reflects social orientation. Cook-Gumperz's and Corsaro's (1977) research illustrates that different areas realize different interactional possibilities. If manipulation of environmental contingencies serves a function in structuring different types of relationships, then the following hypothesis necessarily arises:

If the social structure is based on differentiation of various relationships, and if different areas do realize different interactional possibilities, then we should expect the groups to be further characterized by differentiation in activity preferences.

This hypothesis will be investigated below:

Categories:

Activity area at the moment of observed interaction was recorded. For the purposes of the hypothesis under investigation, activity areas were functionally classified according to type of activity on which these areas are based:

a) Role-Play Areas

Areas which are conducive to role differentiation and, thus, joint activities. Included in this category are the following:

- i) Hospital: contains bed, bandages, stethoscope, 'syringe' etc., suggesting activity based on doctor/nurse and patient interaction.

- ii) Wendy House: contains cooker, sink, pans, cups, plates, high chair, bed, kettle, teapot etc. suggesting activities of a domestic nature, e.g. tea parties.
- iii) Self-created areas: these are 'areas' which are created by the children themselves and are assigned a specific identity; objects from different parts of the nursery are brought together in the construction of this area. e.g. Group 2 children arrange the bricks in a row, put chairs on each one, with a steering wheel at the front and call the structure a 'bus', suggesting an activity based on a passengers-driver interaction.

b) Parallel Play Areas:

Areas in which children work alongside each other on constructive (building) activities, sharing materials:

- i) Art areas: contain painting and drawing materials, easels, paper, scissors, glue etc.
- ii) Dough/plastecine area: contains dough, plastecine, rolling pins etc.
- iii) Puzzle table: contains jigsaws, puzzles based on matching shapes and colours etc.
- iv) Wood table: contains wood, nails, hammer, screwdriver, saw etc.

c) Undefined areas:

These are areas in which the social nature of the activity is not explicitly defined. Children can engage in individual activity or group activity. These areas were further classified according to whether or not they involved fine motor activities, i.e., manipulation of small objects or gross motor activities, i.e., running, climbing etc.:

i) Undefined fine motor:

water table: ships, toys which pump the water, containers of different shapes and sizes, etc.

sand table: pails, spades, cars.

Example of group activity:

Fiona and Derick are playing with boats at the water table, Fiona's ship is "sailing". She calls for Derick's help.

Example of individual activity:

At the sand table, Nancy is putting sand into a pail; "I'm making lovely, lovely mud".

music area: records, record player, musical instruments.

Example of group activity:

Children form an "orchestra".

Example of individual activity:

One child plays an instrument whilst another is listening to the record player.

ii) Undefined Gross Motor:

Included in this area are the climbing frame and large bricks which can be used for constructive

activities or for funning and jumping.

Example of group activity:

Group 1 children arrange the bricks in a row and pretend they are driving to "Hampstead".

Example of individual activity:

Linda and Karen are climbing on the climbing frame,

Linda - Karen: "Watch me doing a backward run."

The following areas are functionally distinct and thus are presented separately. They are included in the discussion because the groups interacted in these areas:

- i) Snack table: self-explanatory.
- ii) Crispie Area: Children can make a chocolate crispie in this area. Objects present include saucepan, corn flakes, chocolate etc. This area is different from those subsumed within the 'Parallel Play' category because only one child at a time can make a crispie whereas in 'Parallel Play Areas' children can engage in their respective activities simultaneously.
- iii) Steps: These are five steps by the fire escape door. Children often congregated here though it is not specifically an activity area. Thus, it was differentiated from areas included in the 'Undefined' category because this category includes areas that are explicitly based on engagement in particular activities.

- iv) See Saw: The see-saw by its very nature dictates a specific form of joint gross motor activity and thus was not included in the 'Undefined Gross Motor' Category.
- v) Cash Register: During the early stages of observation an old cash register was brought into the nursery and was generally placed on a large brick. Though the cash register would appear to be appropriately classified in the role play area (since its very nature is conducive to role play activities, e.g. shopkeeper-customer), it was not included in this category as I noted in the course of observations that the register was broken and a lot of interactions were based on attempts to open the till.
- vi) Non-activity areas: These are areas where the children was their hands, wash their cups after snack, put articles that they have made to take home etc.

Results:

Total interaction frequencies for each group (including internal and external interactions) are presented in Appendix 6.1. (Total interaction frequencies of less than 15 are excluded.) The distribution of internal interactions x activity area is presented in Table 6.6. The groups will be considered separately below.

Group 1:

Interactions are concentrated in the 'undefined gross motor' areas (47 per cent), followed by the 'Role Play' and

Table 6.6

Location x Internal Interactions

Area	Group			
	1	2	3	4
Role Play	439 (16%)	23 (3%)	52 (13%)	13 (8%)
Parallel	240 (9%)	333 (42%)	224 (57%)	10 (6%)
Fine Motor	104 (4%)	41 (5%)	23 (6%)	8 (5%)
Gross Motor	1269 (47%)	319 (40%)	33 (8%)	66 (39%)
Crispie	6 -	5 -	- -	- -
Cash Register	84 (3%)	- -	- -	- -
Steps	2 -	- -	27 (6%)	- -
See-saw	18 -	1 -	2 -	29 (17%)
Dressing-Up	46 (2%)	- -	21 (5%)	17 (10%)
Snack Table	451 (17%)	43 (5%)	2 -	12 (7%)
Non-activity	35 (1%)	24 (3%)	11 (3%)	4 (2%)

() column percentage

Snack Table Areas. These three areas together account for 80 per cent of Group 1's interactions. In contrast, frequency of interaction in the 'Parallel Play' is relatively low. The high interaction frequency in the Snack Table area is interesting in that there is no specific activity here within which children can structure their interactions, i.e., there are not toys which they share and there is no 'expected' performance as there would be, say, in the Wendy House.

Group 2:

Group 2 interactions are concentrated in two main areas, the 'Parallel Play' Areas and the 'Undefined Gross Motor' Areas. This accounts for 82 per cent of their internal interactions. They do not engage in sustained interactions in any other area.

Group 3:

Group 3 interactions are concentrated in the 'Parallel Play' Areas, followed by the 'Role Play' Areas, accounting for 70 per cent of their interactions. The remaining 30 per cent is dispersed over several areas.

Group 4:

The distribution of Group 4 interactions is marked by a striking lack of sustained interaction in any particular area. This is in contrast to the other three groups. The highest percentage of internal interaction occurs in the 'Undefined' Gross Motor area however. This accounts for only 39 per cent of their activities together. The next highest interaction frequency (17 per cent) is in

the see-saw which reflects their lack of sustained involvement in activities. Though the see-saw provides an opportunity for a cooperative activity, the activity is repetitive and, by its very nature, does not pose opportunities for development or expansion as do areas like the Wendy House. In Chapter 4, it was noted that Group 4 engage in more closed interactions (behaviours not conducive to further interaction) than the other Groups (page 138). The absence of sustained involvement in activities is consonant with this finding.

The 'Role Play' Areas, 'Parallel' Areas and 'Undefined' Areas appear to be used by all the groups. The 'Non-activity' areas are uniformly characterized by low internal interaction frequencies. Internal interactions in the other areas (crispie, cash register, steps, see-saw and snack table) are more pronounced for some groups than for others, but they are in all cases quite low.

The hypothesis that the groups would be further characterized by differentiation in activity preferences is not confirmed. Though each group does have particular activity areas where their interactions are concentrated, they do not have distinctive types of activity preferences. Groups 1 and 3 show similar interest in the 'Role Play' areas (16 per cent and 13 per cent of internal interactions respectively), Groups 2 and 3 in 'Parallel Play' areas (42 per cent and 57 per cent of internal interactions respectively), and Groups 1, 2 and 4 in the Undefined Gross Motor

Areas (47 per cent, 40 per cent and 39 per cent of internal interactions respectively). Proportion of internal interactions in the 'Undefined Fine Motor' Areas is markedly similar for all groups (4 per cent to 6 per cent). However, the distribution of activity preferences does serve to differentiate groups from each other:

Group 1: role play, gross motor, snack table.

Group 2: parallel, gross motor.

Group 3: role play, parallel.

Group 4: gross motor, see-saw.

Thus, the preferences in themselves do not in themselves provide a constitutive basis of the social structure under investigation but the distribution of these preferences does appear to be a distinguishing feature. An explanation of social organisation within the framework of physical context per se is therefore not justified. Though the distribution of preferences may distinguish friend from non-friend, we cannot argue that these children are friends just because they like to do the same things.

Considerations

Though children's relationships cannot be explained in terms of the physical context within which they occur, their interactions do reflect environmental contingencies. To illustrate with an extreme example,

Iain (2) and Linda (3) are at the wood table:

Linda: "Can I have the hammer for a minute?"

Iain: "I haven't finished with it yet."

Linda: "I mean after you finish."

Structural features intrinsic to an activity area per se can dictate interactional possibilities. For example, the degree of mutual involvement existing between two children painting alongside each other at their respective easels will obviously be different than that between two children engaged in a joint activity on the climbing frame. Inviting a companion into a shared theme, "All aboard! Let's go!" is expressive of a potential for mutual involvement not realized in utterances such as "Every time I come here I paint a picture", though both utterances did occur within the context of friendly interactions with group members.

Parten (1933) assigned toys a social participation value. Houses and dolls were found to be associated with the most cooperative form of play. Sand, paper, clay, swings, beads and paints were associated with parallel activities. Block play occurred with almost every form of social interaction. Thus, houses and dolls received the highest social value scores whereas toys associated with parallel pursuits were assigned a social value of less than 50 per cent of that ascribed to houses and dolls. It is quite reasonable to expect more sociable interactions to characterize joint activities compared to those occurring within the context of parallel activities. However, we have seen that activity preference does not provide an explanation of social organisation. Children do not form relationships just because they like to do the same things.

Cook-Gumperz and Corsaro (1977) argue that the nature of the interaction children engage in is determined by the locus of interaction itself, physical constants with implicit socially-defined expectations, e.g., activities in the Play House lead to domestic activities. The meaning of an act is thus determined by the meaning of the area:

"Our aim in this paper has been to demonstrate how children employ communicative strategies to connect the accustomed expectations of the nursery school settings with conventionalized expectations to generate socially ordered productions. Peer interaction, then, can be viewed as the continual practice of reality production."

(Cook-Gumperz and Corsaro, 1977, page 431)

However, peer interaction can also be viewed as the production and maintenance of differential relationships. Further, if this differentiation is maintained, then children must be manipulating environmental contingencies in order to structure their interactions. The analyses of 'exclusion' (Chapter 5) and of 'inclusion' indicate that children are actively structuring their interactions on the basis of their relationships with their peers. In Chapter 5 it was demonstrated that the distribution of 'exclusive' ('reject person') initiations is selectively distributed in a manner conforming to the organisation of the children's affiliative preferences. The inclusion analyses indicate that the pattern of responses to inclusive acts also conforms to this structure. Further, the analyses of thematic consonance in Chapter 4 demonstrate

that the children are interacting within a mutually meaningful framework. Though environmental contingencies will undoubtedly affect or determine the actual content of children's interactions, providing a mutual frame of reference, children must be manipulating contingencies within that framework in order for the structure of social organisation to be sustained over a five month period.

Consider the following interaction:

Group 1 children are sitting together in a large brick and are "miaowing" to each other.

Nancy (4) approaches them, saying: "Miaow".

Derick (1) - Nancy (4): "Woof woof"

The signification of Derick's act lies in his relationship with Nancy, couched within a frame of reference established by the ongoing activity. The frame of reference is maintained, i.e., an 'animal' theme. Derick assumes the role of 'dog' in order to exclude Nancy from their activity.

So, the semantic force of any message may reflect not only the nature of the activity engaged in but also, the relationship between the children within that activity. The way in which children manipulate the course of an activity can be a direct function of contingencies dictated by the relationship per se. Consider the following interaction:

Group 3 children are pretending that a clothes rail is a "bus". Linda is the driver and Karen is the passenger.

Linda: "I'm driving on the bus. Who wants

to come on because I'm a driver?"

Karen: "Can I come on?"

Linda: "Yes."

Linda leaves, Karen goes to the driver's position.

Linda returns, saying: "No, I'm still . . .

I'm a driver."

Karen: "You be the driver now but I'll stand up

here. Pretend it's driving that way."

Karen points to the middle of the 'bus' where she was standing previously. Linda goes to the middle, Karen remains at the front.

Karen then 'drives', i.e. turning an imaginary steering wheel around and making appropriate noises.

Karen: "Who wants to get on the bus? . . .

This is my stop. Bye bye."

Linda then leaves.

This interaction is interesting in that it illustrates the active manipulation of environmental constraints within the framework of the contingencies dictated by a particular relationship. The content of the activity itself indicates that children are conforming to "conventionalised expectations" (Cook-Gumperz and Corsaro, 1977; page 414) in the structuring of their activity in so far as role differentiation and expected performance is concerned, i.e., buses have a driver at the front and passengers in the middle. Karen wants to be the driver - however, she is obviously aware of Linda's right to that role over her own as determined by their relationship. She seeks to

gain this role covertly through explicit contravention of "conventionalized expectations", i.e., "Pretend it's driving that way." Karen then vacillates between being a "driver" and being a "passenger". As the "driver", Karen 'drives' and says, "who wants to get on the bus?" As the 'passenger', Karen says, "This is my stop. Bye bye." Vygotsky (1966) and El 'Konin (1966) have both commented that in play the child must conform to the behavioural boundaries dictated by the role he has assumed:

"In play the child is free. But this is an illusory freedom." (Vygotsky, 1966; page 10)

The interaction between Karen and Linda illustrate the extent to which the reality of an ongoing relationship, and the restraints in individual action it dictates, pervade the structure of fantasy.

Interactions within activities between children who are members of larger groups may reflect not only the relationship between the interactants, but their relationships with other children in the group. This is illustrated in the following interaction:

Group 1 children are in a car (bricks in a row with a 'steering wheel' at the front). Arthur assumes the role of 'driver' and relegates Edward and Derick to the back as 'passengers'. Arthur leaves.

Edward - Derick: "Who'll drive?"

Edward's utterance is interesting in that it reflects the following:

- 1) the nature of the activity being engaged in, i.e. a car theme 'Conventionalized expectations' (Cook-Gumperz and Corsaro, 1977, page 414) dictate that a car should have a driver and a passenger.
- 2) the relationship between Edward, Derick and Arthur. Though all children were equally involved in the construction of the 'car', neither Derick nor Edward question Arthur's 'right' to the more desirable role of 'driver' and their relegation to the back as 'passengers'.
- 3) the relationship between Edward and Derick. Edward's utterance suggests that he does not perceive Derick as more entitled to the role of driver than himself (compared to his relationship with Arthur, nor vice versa).

A relationship precedes an interaction and thus, can exercise a determinative influence on the course of an activity. Cook-Gumperz and Corsaro (1977) argue that children's interactions are based on "situated meaning" (page 411) which is meaning defined by the activity area (and its intrinsic socially-defined implications) itself. The examples of children's interactions discussed thus far and the results of the exclusion and inclusion analyses, suggest that the meaning of an act may reflect not only the nature of the activity itself but the relationships between interactants within that activity.

Pronominal references:

"He liked the way Om kept saying 'we', it gave him a sense of solidarity."

(The Nature of Passion, R. Prawer Jhabvala)

In Chapter 5 I argued that terms of address can in themselves express different types of relationships. The appositional use of pronominal references (we vs. you) in 'closed' contexts (compared to 'open' contexts) was found to increase slightly for Groups 1, 3 and 4, reflecting a social context based on the establishment of two discrete alignments (pages 172-179).

In friendly (i.e. 'open') interactions within an activity, first person pronominal references can indicate degree of mutual involvement in an activity. For example, the utterance "I'm*going to make a fancy one with red and green and it's going to be my one" may be of interest to the listener but it does not serve to include him in the ongoing activity as statements such as "We sleep by the river tonight" do. The social implications of first person singular and first person plural pronominal references, insofar as relationships are concerned, are functionally distinct, the latter expressing a potential for a degree of mutual involvement that the former definitionally constrains. This is illustrated in the following interactions of Group 1 and Group 4 children:

(i) Fiona (1) and Brian (1) are repairing their house.

(i.e., bricks stacked on top of each other).

Brian: "Fiona, pass the tools."

* All underlined pronominal references are my emphasis from page 245 to 251.

Fiona: "Which tools?"

Brian: "Our tools."

Fiona gives Brian the medical instruments which are being used as tools.

Mary (4) approaches, protesting against the use of medical instruments as 'tools': "These are sleeping things. . . These are the nursery's."

Fiona (1) - Mary (4): "I know but we're just playing with tools."

- ii) Mary (4) and Nancy (4) are on the bricks, Mary enters a brick and announces: "This is my room. This is my room."

Though both groups are in the same activity area, they structure their interactions within that framework in a distinctly different manner. Group 1 children establish a framework of reference based on a degree of mutual involvement that is noticeably absent in Group 4 interactions. This difference is strikingly conveyed through first person pronominal reference.

Style of 'inclusion' can also reflect the relationship between interactants. Consider the following two interactions:

- (i) Karen (3) is in the see-saw with Nancy (4).

Linda (3) is sitting beside them in a cardboard box she has called her 'car':

"Karen, would you like to come in my car?"

(ii) Iain (2) is playing on a 'ship' (i.e., the climbing frame) with Group 1 children.

George (2) approaches:

George: "C'mon, Iain. That's not our ship."

Linda's and George's statements are functionally similar in that they are both attempting to integrate their friends into a shared activity and lure them away from activities with other children. However, they use contrastive pronominal references - 'my' versus 'our' - in their attempts to achieve this end. This does suggest a fundamental difference between the relationship of Linda and Karen compared to that between Iain and George. Moreover, if we compare an interaction between Karen and Linda at the wood table with an interaction between Iain and George in the same location this difference is equally apparent:

Karen (3) and Linda (3):

Linda and Karen are engaged in parallel constructive activities. Linda finishes her task and gives it to Karen saying: "I made this for you." Linda then takes the screwdriver from Karen saying: "because I can drill a hole for you because I do it faster."

Linda is drilling, Karen is watching.

Karen: "I want to do it now."

Linda: "Alright, and then let me do some."

Karen is drilling, Linda takes the screwdriver from her saying: "I'll have a bit now."

Linda drills for a while, then both are looking at the hole in the wood.

Linda: "It's quite deep now."

Karen: "I'm taking another shot after you have finished."

Linda: "Right, you have the second shot."

Karen is drilling. Linda picks up the present she gave to Karen, turning a piece of wood on top, she says: "This can move. That's why I put it quite loosely."

Karen continues drilling. Linda is watching her.

Karen: "I'm going to have quite a long shot, Linda."

Karen stops drilling and says: "See, Linda."

Linda is looking at the hole in the wood.

Karen: "Can you see?"

Linda doesn't answer, she is looking at the hole in the wood, then picks up screwdriver.

Linda: "Now I'll have a very, very, very long shot."

Karen: "Not too long."

Linda: "I'm going to do it fastly."

Karen is looking at her present: "It's a funny shape."

Karen suggests an extra piece of wood be put on.

Linda: "I'm not going to put it on now but it is funny."

Karen turns around the top piece, saying:

George: "It's not like a diving board.

Iain: It looks like a little gun."

Linda: "Yeah - bang, bang."

Karen: "Bang."

Linda: "See how deep it is now."

Karen: "Can I have a shot now, Linda?"

Linda: "No, because I'm going to have another shot."

However, Linda gives Karen the screwdriver and leaves, saying: "Here you are."

George (2) and Iain (2):

George and Iain are making something together, Iain is cutting the wood. He gives the saw to George, saying: "You get this one for me, O.K.?" Iain picks up a piece of wood and says:

George: "There's certainly bended nails in here."

He is removing the nails with pliers, saying repeatedly: "bended".

George, re. nails in the wood: "We need it to turn round."

Iain: "I'm going to take it to my house, aren't I?"

If you come to my house, it will be yours and mine because you're sawing it and I'm making it. We're making it so its your's and mine both.

George is cutting the wood, then passes saw to

Iain, saying: "Now you saw."

Iain: "Yes."

George: "I made you a bigger slit."

Iain cutting the wood, saying: "Your's and mine both."

He then passes the saw to George saying: "I've done quite a bit. Now you do it."

George is cutting the wood. Iain is looking at a piece of wood that George had been working on previously:

Iain: "I don't know how you make it so round. . . We get it like that."

George cutting the wood, says: "Iain, I think we should saw very fast. When you . . ."

Iain is looking in the tray containing nails.

George: "Now you saw."

Iain is cutting the wood, then passes saw to George, saying: "I've done quite a lot."

George is cutting the wood, Iain is watching:

. . . George gives Iain the saw, "Now do that bit, Iain."

Iain cuts the wood, then gives George the saw, saying: "I done quite, quite a bit. I done quite a bit."

. . . Iain leaves for the snack table. George follows, asks teacher at table to write "George and Iain" on their construction. Iain is eating, watching George.

Iain: "Because we don't want it to turn, do we?"

(reference unclear)

George doesn't respond. Iain repeats: "Because we don't want it to turn"

George doesn't respond, interaction ends.

Consideration of these interactions

These texts both feature friendly interactions occurring within the framework of a constructive activity. Environmental contingencies constitute the actual content of both conversations yet the nature of the interactions reveals fundamentally different types of relationships between the Group 3 children and the Group 2 children. Though Karen (3) and Linda (3) are working on the same construction, the degree of mutuality inhering in their conversation is minimal. Linda's involvement in Karen's activity commences with her taking it over saying, ". . . I do it faster". All references to the activity are in the first person singular. Each checks the other's use of the screwdriver in order to sustain individual involvement, e.g., Karen: "I want to do it now", "Not too long", Linda: "Let me do some", "I'll have a bit now". Indeed a large part of their conversation does concern securing personal involvement in the ongoing activity. In contrast, in George's and Iain's activity, each child ensures that the other contributes to the ongoing activity. Statements such as "I've done quite a bit. Now you do it" (and subsequent compliance) are explicit acknowledgements of mutual responsibility for the construction of the object. This mutuality is reflected in the use of first person

plural pronouns that recur in their conversations, individuation is similarly reflected in the activity of Group 3 children by the very absence of collective references. References are made to Linda's previous activity (e.g. Karen: "It's a funny shape") but they are thematically peripheral to the ongoing activity. In contrast, Iain integrates George's previous activity into their collective endeavour: "We get it like that". Thus the distinction between the relationship of Karen and Linda, compared to that between George and Iain, suggested in their inclusive statements ("Karen, would you like to come in my car" versus "C'mon Iain, that's not our ship") are maintained across different physical contexts. The way in which children use environmental contingencies reflects this difference in relationships. Indeed, the lack of mutuality in Group 3's relationship is evident across a variety of contexts. We saw in the 'bus' example, the two children vying to be 'driver'. (Linda: "I'm a driver" versus Karen: "You be the driver now, but I'll stand up here. Pretend it's driving that way"; Karen is a 'covert' "driver".) Similarly, personal involvement is constantly being established in the above activity at the wood table. Moreover Linda dominates in both activities ("Who wants to come on because I'm a driver", and Linda takes over Karen's construction saying, "because I do it faster".)

Children structure their interactions within a framework of reference defined by the physical context yet

the way they manipulate environmental contingencies within that context appears to be determined by contingencies intrinsic to their relationship. From this assertion follows the further one that an analysis of children's interactions in terms of the physical context (as do Parten (1933) and Cook-Gumperz and Corsaro (1977)) may reflect the extent to which environmental contingencies dictate the content of an interaction, but it will not provide us with information about how children organise and structure their interactions within that context. Physical context may provide a medium of communication but the way in which this medium is used appears to be determined by contingencies particular to the relationship between the participants in the activity. Collective versus singular first person pronominal references could constitute an interesting basis for distinguishing the extent to which children use the physical context to establish a mutual versus parallel activity. Whereas the potential of certain areas such as the wood table can be realized in individual action (in contrast to areas such as the Wendy House whose potential can only be realized in group action), we have seen that joint action can also be established in these areas. Thus, though Table 6.6 indicates that both Groups 2 and 3 have a striking preference for parallel activities, they may not be using these areas in the same way insofar as their interactions are concerned.

The ongoing activity may provide a frame of reference, but how that activity is conducted (within the social context) is determined by extant relationships between participants. These speculations may be expressed in the form of the following hypotheses:

- 1) The data considered above suggests that the use of first person singular and first person plural pronominal references indicate different types of relationships in that they reflect degree of mutual involvement. If this is the case, then we should expect to find a significant difference between the groups in their use of first person pronominal references but not in their use of second person pronominal references.

The rationale underlying this approach is as follows: if children are just using plural references on the basis of number of people involved in an ongoing activity, then there should be no difference between the groups in their use of singular and plural references for both first and second persons.

In French, there is a structural difference between singular and plural second person references based on syntactic features in speech ('tu' - 'vous') whereas in English, this distinction is not made. The same form is used to address one person and more than one person. However, this does not hold for first person pronouns. In English (as in French), two different forms are used

to distinguish singular from plural reference: the 'I' - 'We' (or 'je' - 'nous') distinction does not only reflect number of people being addressed, it also reflects a differentiation between self-reference based on individuation versus that based on collectivization. Now, if children are using the 'I' - 'we' distinction in the same way that they are using the distinction between second person singular and plural pronouns - i.e., it merely reflects number of people present - then we should expect no difference between the groups in their use of first person pronouns (plural and singular) and in their use of second person pronouns (plural and singular).

- 2) If the above hypothesis is confirmed, then we should expect to find that groups will be expressing different degrees of mutual involvement in the different activity areas.

Categories: Pronominal references:

For the purposes of this analysis, all first person singular and first person plural - i.e., I, we, mine, our - were recorded. Similarly, all second person singular and second person plural references were recorded, i.e., you, your. Second person plural references occurred when the child was addressing more than one individual. Only pronominal references occurring in a friendly context were recorded as the maintenance of mutuality in activities necessarily means a friendly context must prevail. It was decided that it was not necessary to

conduct reliability tests of these categories as only verbal pronominal references were considered. Thus, there were no interpretive problems with the categories. In only one instance did an interpretive decision have to be made. This occurred for the above-cited interaction between Iain and George at the wood table. The expression "Your's and mine both" was coded as a first person plural as it is a collective reference to mutual activity and thus coding it as first person singular or second person singular would distort the content of the utterance.

Results:

1) Group differences in pronominal reference:

First person and second person pronominal references by groups are presented in Table 6.7. The hypothesis under investigation is confirmed. The difference among the groups in their use of first person pronominal references is significant at the .001 level ($\chi^2 = 46.33_{df=3}$) whereas the difference in their use of second person pronominal reference is not significant ($\chi^2 = 2.66_{df=3}$).

Thus, first person pronominal references are expressive of relationships and children do appear to be selectively structuring their interactions to establish certain types of relationships. The absence of any significant difference between the groups in their use of second person pronominal references further substantiates

Table 6.7

Pronominal References by Groups

1st Person		Singular	Plural
I N T E R A C T I O N S	Group 1	572 (69%)	255 (31%)
	Group 2	228 (78%)	63 (22%)
	Group 3	175 (89%)	21 (11%)
	Group 4	89 (87%)	13 (13%)

2nd Person		Singular	Plural
I N T E R A C T I O N S	Group 1	556 (91%)	55 (9%)
	Group 2	153 (92%)	13 (8%)
	Group 3	81 (94%)	5 (6%)
	Group 4	37 (97%)	1 (3%)

() row proportions

this finding. Indeed, as stated above, the distinction between second person singular and second person plural references does not reflect the intrinsic nature of a relationship so much as number of people being addressed.

Further, the distinction between the interactional styles of Groups 1 and 2 versus Groups 3 and 4 observed previously is maintained. In Chapter 5 it was found that Groups 3 and 4 exercised a less rigid distinction between the 'reject theme' and 'reject person' categories of behaviour than Groups 1 and 2. In this chapter, it was found that, for Groups 3 and 4, the internal and external initiations of inclusive behaviours were equally distributed. Perusal of Table 6.7 indicates that Groups 1 and 2 use collective references more than Groups 3 and 4. Thus there does appear to be a relationship between the use of these types of behaviours and interacting in a collective manner. Indeed, the difference between Groups 3 and 4 in their use of collective references is minimal.

2) First person pronominal reference by area:

Categories: Activity Areas

For the purposes of this analysis, children's interactions in the following areas were considered, Role Play, Parallel, Fine Motor, Gross Motor, because these areas were used by all the children (see Table 6.6) whereas the other areas were used by some of the children (though infrequently) and not at all by others. The Gross

Motor and Fine Motor Areas were considered together because, as stated previously, their social potential is undefined insofar as joint versus individual action is concerned.

Results

The results of the above analyses indicate that an investigation of children's use of first person pronominal references in different activity areas is justified. The results of these analyses are presented in Table 6.8a. The hypothesis that children will be using these areas differently insofar as collective versus individual actions are concerned receives confirmation. A significant difference was found for all three areas under consideration (Gross Motor and Fine Motor, $\chi^2 = 17.16$ $p \leq .001$; ^{df=3} Parallel, $\chi^2 = 18.86$ $p \leq .001$; ^{df=3} Role Play $\chi^2 = 11.62$ $p \leq .01$). ^{df=3} These areas will be considered separately below:

Fine Motor and Gross Motor Areas:

Groups 3 and 4 rarely use plural pronouns in these areas, though Group 4 uses them more frequently than Group 3 (16 per cent versus 9 per cent respectively). Groups 1 and 2 are thus using these areas for collective activity more than Groups 3 and 4.

Parallel Areas:

The most striking finding here is that Group 2 children use these areas for collective action

Table 6.8

1st Person Pronominal Reference by Area

Gross Motor and Fine Motor Areas:

		Singular	Plural
I N T E R A C T I O N S	Group 1	242 (66%)	124 (34%)
	Group 2	74 (72%)	29 (28%)
	Group 3	49 (91%)	5 (9%)
	Group 4	27 (84%)	5 (16%)

Parallel Areas:

		Singular	Plural
I N T E R A C T I O N S	Group 1	69 (86%)	11 (14%)
	Group 2	64 (74%)	22 (26%)
	Group 3	82 (95%)	4 (5%)
	Group 4	17 (100%)	0 -

() row percentages

more than all the other groups combined. Indeed, collective references are totally absent in Group 4's interactions in these areas. However, the distinction between the interactions of Groups 1 and 2 versus Groups 3 and 4 holds for these areas too.

Role Play Areas:

Group 1 engages in considerably more interactions in these areas than the other groups, and Group 3 the least. The distinction between Groups 1 and 2 versus Groups 3 and 4 is less striking in these areas. Group 4 uses relatively more collective references than Group 2 (33 per cent versus 29 per cent).

Perusal of Table 6.8 suggests that the occurrence of collective references are to some degree affected by area, however, this relationship is not consistent for all the groups. The most striking effect is found in Group 1's interactions: 47 per cent in Role Play areas, 34 per cent in Fine Motor and Gross Motor areas and 14 per cent in Parallel areas. In contrast, the distribution of collective references in Group 2 interactions is relatively constant across the various areas: 29 per cent in the Role Play area, 28 per cent in Fine Motor and Gross Motor areas, 26 per cent in Parallel areas. The distribution of collective references in the interactions

Table 6.8a

1st Person Pronominal References by Area

Role Play Areas:

		Singular	Plural
I N T E R A C T I O N S	Group 1	81 (53%)	72 (47%)
	Group 2	15 (71%)	6 (29%)
	Group 3	23 (85%)	4 (15%)
	Group 4	8 (67%)	4 (33%)

of Groups 3 and 4 follow a similar pattern to that of Group 1's interactions though they occur with considerably less frequency. For Group 3 interactions, the distribution of collective references is as follows: 29 per cent in Role Play areas, 9 per cent in Fine Motor and Gross Motor areas and 5 per cent in Parallel areas. In Group 4 interactions, we find collective references distributed as follows: 33 per cent in Role Play areas, 16 per cent in Fine Motor and Gross Motor areas, an absence of any collective references in Parallel areas. Thus, though there is evidence that Groups 1, 2 and 3 are using collective references differentially according to physical context, there are nevertheless substantive (and significant) differences between the groups themselves, indicating that they are structuring different types of interactions in the various activity areas.

Conclusion:

From an analysis of children's behaviours within the context of their interactions, a distinct social structure emerges. In Chapter 3 we saw that a sociographic analysis of interaction frequencies yields four distinct groups. When we looked at behaviours that were the content of these frequencies, we saw that they provided constitutive bases of this distinction maintaining the organization and differentiation of the friendship groups. As noted in Chapter 4, children do generally engage in thematically consonant interactions. Thus, their

interactions in the various areas of the nursery are occurring within a framework that is mutually meaningful. This is, of course, a necessary prerequisite to the maintenance of any social structure that is characterized by consistency and stability over time. Further, children actively and selectively structure their interactions in a manner that maintains a framework based on differential relationships. In Chapter 5 we saw that even in conflict (i.e. 'closed' interactions), children respond differentially to group members and non-group members; for Groups 1 and 2, group members are more likely to have the content of their act rejected whereas non-group members are more likely to be rejected themselves. Groups 3 and 4 are making a distinction in this direction, however, it is not of sufficient magnitude to yield statistical significance. However, exclusion is used more frequently in interactions with non-group members by all groups. In friendly contexts (i.e. 'open' interactions), this distinction is maintained. Children respond differentially to the inclusive initiations of their peers such that group members are more likely to receive a friendly response in contrast to non-group members who are less likely to receive a response and when they do, that response is more likely to be an unfriendly one.

Within the groups themselves, the analyses of pronominal references show that different types of relationships based on different degrees of mutual involvement are being expressed. The children (Groups 1

and 2) who engage more frequently in collective references also engage in a more rigid use of inclusive behaviours. Conversely, the children (Groups 3 and 4) who engage less frequently in collective references, also engage in a less rigid use of inclusive behaviours though we have seen in Chapter 5, and in this chapter, that they do actively maintain a distinction between their relationship and each other and their relationships with other children. Theoretically one could assert that Groups 1 and 2 are more 'cohesive' than are Groups 3 and 4 in that the former's interactions reflect a higher degree of collective action (in addition to their use of inclusive and exclusive behaviours). However, as stated previously, the relationships of all these children were consistent and stable over a five month period and so one must assume that they were satisfying to the children involved. Thus, the imposition of any value-laden dimension that aligns children on the basis of a heuristically defined concept may reflect the social values of the investigator more than what is actually important to these children. Just as adults have different relationships characterized by varying degrees of mutual involvement, so do young children.

Thus, the results of analyses conducted in this thesis do vindicate an assertion that children establish a social structure based on their relationships. They interact differentially and selectively with individuals within their social environment, thereby maintaining the observed social

structure. The portrait of the child as constitutionally incapable of forming and maintaining relationships due to constraints dictated by egocentrism ^{does} not appear to be justified. Indeed, intra-individualistic approaches to early social behaviour are in themselves fraught with heuristic constraints, i.e., content cannot be extracted from context with the intent of understanding the former. This is strikingly illustrated in the argument that propinquity underlies children's interactions, an argument that does not withstand empirical validation. If we consider children within their social context, we see emerging a pattern of relationships that is selectively established and structured through the children's own actions.

CHAPTER 7: CONSIDERATIONS ON STRUCTURE

"In order to handle the world with maximum competence it is necessary to consider the structure of things. It is necessary to become skilled in manipulating systems and in abstracting forms and patterns. This is a truth which, as a species, we have slowly come to know. If we were ever to renounce the activity, there would be a hefty price to pay."

(Donaldson, 1978; page 82, her emphasis)

The conclusion of this thesis is that children selectively and actively structure their social worlds, the net result of this structuring activity a social organisation that is functionally autonomous and self-regulating. This social organisation is based on a system of relationships which provides a frame of reference within which children structure their interactions. Further, this structure can only be gleaned through a study of interactions within their social context. The isolated acts of the individual or the interacting dyad will not in themselves reveal the framework within which they are couched. Consider the following interaction:

Jimmy (2) is absent. Brian (1) asks George (2) and Iain (2) where Jimmy is:

Iain: "He's away on holiday."

Brian: "He went to Cupba Cupba."

Iain: "Jimmy's staying with his Granny."

The signification of Brian's act extends beyond the immediate interchange, framed within an awareness of prevailing inter-relationships, i.e., his relationship with Jimmy versus that of George and Iain. Brian doesn't know where Jimmy is but presumes, correctly, that he can find out through asking them. Walkerdine (1982) writes:

"Children are engaged in a process in which the crucial moment of understanding lies in a specific relation of signified to signifier."
(page 131)

In this thesis, we may consider an interaction to be the signifier and the relationship, the signified.

Serafica (1982) writes that the
"social interactions out of which social knowledge is constructed occur within a social milieu which has its own intrinsic organisation."
(page 14)

We have seen that the 'intrinsic organisation' characterizing the social milieu of these children is the product of their own actions. As has been stated, differential relationships, indicated by the results of sociographic analyses in Chapter 3, are substantively confirmed in the actual content of the children's interactions. We see this illustrated in the above-cited interaction in which differential relationships are mutually acknowledged and confirmed, thus giving an encounter a meaning extending beyond the interacting dyad. Similarly, the signification of Linda's (3) statement to Karen (3) and Nancy (4),

"I'm only going to ask Karen in my car", extends beyond the utterance itself to an affirmation of differential relationships. The structure is dynamic, interactions affirming and re-affirming the selective organisation of inter-relationships. Behaviours subsumed within the 'exclusion' (Chapter 5) and 'inclusion' (Chapter 6) categories are functionally contrastive and the selective distribution of their use conforms to the selective distribution of their interaction frequencies:

"relationships exist over time and each interaction within a relationship may be influenced by past interactions as well as expectations of future ones."

(Hinde, 1979; page 153)

In Chapter 3, social structures based on dominance, attentional and sociometric criteria were described. Though the heuristic value of these structures has been demonstrated, their phenomenological or experiential value has not. Dominance and attention structures have been found in several groups of young children though the way in which they are functionally operative is not clear, phylogenetic continuity assumed though their ontogenetic significance has not been demonstrated. Montagner *et al* (1974) argue that dominance structures are ^{on an *a priori* basis} superimposed₁ on human groups. ~~as a result of~~ This criticism is no less applicable to attention structure theory. Similarly, sociometric studies have demonstrated differential popularity within a class of children, yet the extent to which 'popularity' is functionally operative

in the formation and maintenance of relationships, i.e., within a child's social world, is not clear. We do not know whether these structures are functionally intrinsic to a group itself - i.e., that the heuristic criteria on which they are based are organizational features of actual relationships - or the experimenter's hypothetical structure of his subjects' relationships. The results of this research endeavour indicate that children may use their relationships with each other as a structural basis such that their interactions are selectively embedded within a context based on their relationships.

The young child then does not appear to apprehend his social world in monolithic terms as undifferentiated but, rather, in differentiated terms as a system of relationships; "he is given to structuring" (Donaldson, 1978, page 88). Serafica (1982) writes:

"The hallmark of an interpersonal relationship is differential responsiveness. When two individuals have a particular relationship with one another, as in friendship, it is assumed that under certain conditions they will interact with one another in a manner different from their interactions with others. An adequate operational definition of friendship therefore requires a demonstration of differential responsiveness. In addition we need to know whether the difference is quantitative, qualitative or both. For instance, do friends resolve their conflicts more frequently than do nonfriends? Do they resolve them differently?" (page 122)

The children comprising the sample here do appear to have satisfied Serafica's friendship criterion. Differential responsiveness prevails both in 'peace' ('inclusion') and in conflict ('exclusion'). Moreover, these interactions occur within a selectively structured framework that is consistent and stable over a six-month period. Differential responsiveness thus is used to actively maintain the distinction in inter-relationships.

Differential responsiveness has been demonstrated in interactions between school-aged children in experimental settings based on a comparison between friends and non-friends. In some cases the dyads are acquaintances (e.g. Newcomb et al, 1979) whilst in other cases they are strangers (e.g. Foot et al, 1977; Serafica and Destefano, 1982). Distinct differences between friends and non-friends are reported, friends being more likely to work towards a common goal, to engage in expressions of affect (e.g. smiling or touching), to express commands based on mutual intent and so forth. Gottman and Parkhurst (1980) compared preschool dyads comprising friends and strangers at a child's home. Interactions between friends were found to be characterized by greater communication clarity, fantasy, responsiveness and solidarity. Though these studies do indicate that young children are differentially responsive to their peers, none of them indicate how differential responsiveness is operative in a context, such as a nursery, within which a child may have to coordinate different relationships of a potentially

different nature. Selectivity and stability would here be necessary prerequisites of differential responsiveness yet the very nature of the studies precludes an investigation of these factors. Only one interactional possibility was available, some used strangers as their 'nonfriend' sample and some used experimental settings. Though such investigations are not without interest, they do give a limited view of the role of differential responsiveness which in this thesis has proved to constitute an organizational basis of a social structure in young children.

Foot et al (1980) argue that acquaintanceship may be a "continuous dimension of friendly affect" (page 3). The results obtained here would seem to provide some support for this assertion. Children engage in friendly and unfriendly behaviours with both friends and non-friends but what differentiates the former from the latter is the relative distribution of these behaviours. For example, in Chapter 6, results of analyses indicated that internal inclusive initiations are more likely to receive a response and that response is more likely to be 'open' whereas external inclusive initiations are less likely to receive a response and that response is more likely to be 'closed'. Similarly, it is the relative distribution of 'reject theme' and 'reject person' (exclusion) behaviours that differentiates friend from non-friend.

Differential responsiveness eludes description within a reductionist framework in which behaviours are distinguished from each other by their 'reinforcing value' such that the

child who emits positive acts is more likely to be the recipient of positive acts and so forth. As noted in Chapter 1, these functional classifications (e.g. positive versus negative reinforcement) subsume such a broad spectrum of behaviours that it becomes impossible to gauge qualitative processes that are differentially operative in different relationships. Act emitted is certainly not distinct from act received, but 'Cause' cannot be found within a unitary explanation such as the concept of reinforcement. The principles underlying social learning theory cannot account for the selective differentiation of relationships. This is illustrated by Master's and Furman's finding that rates of engaging in reinforcing or neutral acts are not related to specific friendship selection. Selectivity of friendship choice is similarly salient here; indeed, it is the basis of this thesis.

Heterogeneity characterizes the child's social world just as it does the adult's world. Children do engage in different types of relationships and thereby challenge unitary explanations of their milieu. This is illustrated by the finding in Chapter 6 that Groups use first person pronouns (singular and plural) differentially across different physical contexts; thus, we must assume that they structure their relationships themselves. Gottman and Parkhurst (1980) found social comparison activities involving exploration of feelings and common ground to characterize younger children's (under five years)

interactions more than those of older children (five to 6.1 years). On the other hand, younger children were concerned with establishing social contrast with strangers. This research further illustrates the extent to which young children structure their relationships. Excessively determinist paradigms do not allow for the possibility of differential relationships and hence cannot account for its occurrence. Differential relationships in preschool children thus challenge theoretical assertions that:

- a) social behaviour can be explicated by the tenets underlying learning theory,
- b) children have no intrinsic interest in relationships (Piagetian cognitive theory).

Little is known about the relationships of young children. This dearth of knowledge would seem to result from a tendency to look at the behaviours or cognitions of the individual child. For example, McLoyd et al (1984) comment that most behavioural investigations of early peer relations tend to look at initiations. Learning theorists, Masters and Furman (1981), coded initiations and responses separately in their observations of preschool children, thus precluding an investigation of their distribution within interactions. In Chapter 1 it was argued that this focus on the individual in research on relationships stems from the primary assumption that the child is not initially social, hence a focus on how he becomes social, be this process expressed in terms of

differential rates of emission of differentially reinforcing behaviours (i.e., extra-psychic determinism) or be it expressed in terms of cognitive change within the individual (i.e. intra-psychic determinism). In either case, a study of relationships is intrinsically excluded by the very nature of the paradigms generally applied to children's social behaviours. This can perhaps account for Shantz's (1982) observation that "very little research or theory has been devoted to the way in which social organisation is manifested to the child." (page 189)

Much research has tended to address the determinants of friendship, both cognitive (e.g. Selman, 1980; Youniss, 1978) and sociometric (e.g. Hartup et al).

In some cases, sociometric and cognitive factors are brought together, with reports of observed correlations (e.g. Jennings, 1975; Rubin, 1975). This type of research necessarily concludes with recursions to the individual and his cognitive and/or social competence. Thus a lot of research on early relationships has tended to:

- 1) make assumptions about the social relationships of the child on the basis of his present level of cognitive development
- 2) analyzed a social phenomenon in relation to the individual without considering the social context within which the phenomenon occurred.

As noted in Chapter 6, many researchers seem concerned with gauging 'competence', with an idealised norm, as

defined by position along a unitary dimension which functions as both cause and explanation of the phenomenon under study.

The assertion that social behaviour is the result of intra-individualistic processes has to some degree constrained the study of the inter-individual at the pre-school level in spawning assumptions that are assumed to have both psychological and inter-personal veracity. For example, Corsaro (1981; 1979) examines the use of access and resistance rituals in preschool groups with the assumption that the child engages in these activities to secure personal involvement in an activity. This point was discussed in Chapter 5. He did not investigate the possibility that these behaviours could be selectively distributed within a context based on relationships but rather, examined their occurrence in relation to the individual child. It is assumed that the young child has no intrinsic interest in the formation and maintenance of relationships yet we have seen in this research endeavour preschool children selectively including and excluding each other within a context based on relationships.

Bearison (1982) attempts to bring the Piagetian child and his social world closer together by arguing that knowledge occurs within and is derived from a social environment, and therefore is necessarily socially structured. Hence a study of relationships based on the cognitions of the individual child is theoretically justifiable. By arguing the inherently social basis of

knowledge within Piagetian theory, Bearison therein posits a degree of theoretical affinity between Piaget and Vygotsky and Mead, yet the contrastive orientations of these theorists (i.e., the intraspective orientation of Piaget versus the extraspective orientations of Mead and Vygotsky) render this argument strained. According to Vygotsky (1962), cognitive structuralization is the result of internalization of social structures:

"In our conception, the true direction of the development of thinking is not from the individual to the socialized, but from the social to the individual." (page 20)

Though both Piaget and Vygotsky propose epistemological theories of development, Vygotsky argues that development proceeds from inter-psycho functioning to intra-psycho functioning whereas in Piagetian thought, intra-psycho functioning can act as a constraint on inter-psycho functioning, e.g., the concept of egocentrism. Mead argues that the self ('me') evolves within a social context through the medium of language (Riegel, 1978); the inter-personal therein regulates the intra-personal, whereas in Piagetian theory, the causal chain is reversed. Environmental factors serve a catalytic function rather than a directly causal function, behaviour is ultimately endogeneously determined.

The results of analyses obtained here suggest that children actively structure their relationships. They impose order and consistency upon each other, i.e. upon their social world. The results of communication analyses

conducted in Chapter 4 indicate that consonance is a regulative feature governing children's interactions. Mutually meaningful interactions are actively sought and achieved; dissonant interactions tend to be rectified, i.e., rendered mutually meaningful. A social framework based on reciprocal regulation and control is an implicit result of this process. Within this framework differential relationships are conveyed. Children structure their interactions in an active and dynamic way to maintain a distinct system of inter-relationships (inclusion and exclusion, the constitutive bases of this distinction) yet are also willing to engage in friendly interactions with the peer group as a whole (e.g., in Chapter 6 it was found that initiations based on activity descriptions are more likely to lead to an 'open' response than 'inclusive' initiations).

Thus, the children appear to have resolved what Glick (1978) sees as the main task of social life, that is, "to sustain and maintain coherent courses of action which are related coherently to an interactive context" (page 5). The social structure observed is predicated upon interactions having a signification that extends beyond the immediate interchange. Moreover, we could not even have observed a social structure over a six-month period if children's conceptions of each other were transitory and bound to the immediate moment as many theorists assert (e.g. Selman, 1980; Youniss, 1978; Serafica, 1982; Bee, 1981).

A distinctive assumption of much of the research literature described throughout this thesis is that theoretical representation is presumed to directly correspond to actual psychological structures, theoretical reality thus reflecting psychological reality. Assumptions of isomorphism between theoretical structures and psychological structures are strikingly illustrated in the assertions of dominance theorists of a functional equivalence between tasks requiring subjects to seriate objects and tasks requiring subjects to rank peers on relative toughness (e.g. Edelman and Omark, 1973; Strayer and Chapeskie, 1980; Slukin and Smith, 1977). (This was discussed in greater detail in Chapter 3, pages 65 - 67.) For example, Edelman and Omark (1973) write that "ordering children into a hierarchy is equivalent to the logical operation of seriation" (page 108). Strayer and Chapeskie (1980) attribute the poor performance of their preschool subjects on such tasks to the constraints intrinsic in egocentrism, thus using a theoretical construct to explicate poor performance on measures of other theoretical constructs. Indeed, the assertion that cognition of the physical world and cognition of the social world are isomorphic is itself being challenged. For example, Hoffman (1981) and Damon (1981) differentiate between people and objects on the basis of their agency.

Lack of knowledge does presume lack of control and organisation, but failure to meet performative ideals on heuristic measures of knowledge does not ipso facto imply

its absence. However, this is a prevailing assumption in much of the ^{above} research. For illustrative purposes, let us consider person perception theory which argues that our psychological interpretation of the other's behaviour results in the attribution of stable or dispositional characteristics, i.e., personality traits. The interpretive result is our psychological portrait of the other, functionally expressed in our behavioural expectancies of others and our interactions with them. Traits are thus theorized to provide the organizational basis of our relationships with others (e.g. Livesley and Bromley, 1973; Rogers, 1978; Rholes and Ruble, 1984; Peevers and Secord, 1973). A child's expressed descriptions of people are held to reflect his internal organisation of social events.

As the theory goes,
 the young child does not use dispositional terms in his descriptions of others. ^{by person perception theorists} Cause is ascribed to egocentrism and a resultant inability to abstract or organize experiences derived from interactions in terms of internal constants. Responding only to that which is immediately present and visible, the young child's social world is variant and thus unpredictable. The constancy of human nature that underlies, and renders order to, this kaleidoscopic flow of physical events is not apprehended by the young child.

Egocentrism is presumed to place a ceiling on the child's capacity to apprehend human nature; the fragmented perceptions of the syncretic mind preclude the possibility of a social structure (like the one that is being proposed

in this thesis). Piagetian theory is ^{thus} used_A to provide an interpretive framework. The assumption of egocentrism is central to the differential functions ascribed to superficial versus personality characteristics as internal organizational strategies. Behavioural predictions are therein made, based on the premise that the nature of an act is an outcome of intra-individualistic processes:

"If a person uses concise or peripheral terms to describe people he is probably at a disadvantage because effective and sensitive social interaction depends on being able to discern regularities in the superficially diverse actions of a person."

(Livesley and Bromley, 1973, page 106)

The results of analyses conducted in this thesis necessarily argue against any assertion that the child cannot perceive order and regularity in his social world. The social order observed is predicated upon order and regularity which in turn pre-supposes that children must be engaging in some form of interpretive process, based on social contextual features, that directs their interactions, though the substantive content of this process is unknown to us. The selective distribution of inclusive and exclusive behaviours does not correspond with a world view based on "outwardly observable and varying appearances and actions" (Livesley and Bromley, 1973; page 118). For example, the differential distribution of 'reject theme' and 'reject person' (exclusion) categories of behaviour suggest that young children may act upon their social worlds with intended effect, this in turn suggesting an awareness

of the effect of their actions upon others. This awareness is further suggested by the finding that the latter is more likely to lead to a 'closed' response than the former, thus emphasizing its 'exclusive' function.

Freeman et al (1982, page 55) write that "context-specific frames of reference must be set up during social negotiation" (their emphasis). The social structure observed in this thesis is based on context-specific frames of reference provided by relationships and is thus consonant with Walkerdine's (1982, page 131) interpretation of context as a "criterial feature of signification itself". Indeed, as noted in Chapter 5, Walkerdine criticizes psychological theory for its tendency to bifurcate context and the child into distinct external and internal realms, "the context/cognition problem becomes one of how the social impinges upon the preexisting individual" (page 131).

Traits or dispositional characteristics are heuristicly ascribed methods of internal organisation of social experiences. Implicit in approaches based on verbal or written reports is that the child's understanding of the other is captured in his expressed thought, that description reflects concept. Theoretical expectations are thus given an intrinsic validity or truth value such that a child who does not meet performative expectations is necessarily reflecting cognitive immaturity. Heuristic absence reflects psychological absence. The relevance of the phenomenon to the experimental paradigm is not so much investigated as assumed. It is perhaps the 'hubris' of an

empiricist to assume that the phenomenon should fit into the paradigm rather than investigating the adequacy of the paradigm to the phenomenon itself. ^{New paragraph} Glick (1978) argues that social knowledge cannot be gauged through reflections in socially isolated contexts. This was discussed in Chapter 1 and is indeed the position adopted in this thesis. Traits are a means of communicating apprehension of constancy in the other. This does not ipso facto imply that they constitute an internal method of organisation such that their absence necessarily implies absence of organisation. Indeed, Freeman et al comment (1982):

"The common image of developmental psychologists is precisely one in which they invite children to reason 'to attain some particular conclusion', noting whether or not the appropriate conclusion is in fact attained, thereby inferring something about the child's reasoning capacities. Only recently have psychologists questioned whether or not the child's reasoning processes were governed by the same 'particular abstract character' as that which referentially framed the conclusion from the experimenter's point of view; whether the child's temporary interest really did coincide with the experimenter's."

(page 55)

As stated above, the social structure observed in this research endeavour was stable over a five-month period, thus suggesting that though children may not be able to express their bases of social organisation, overt absence does not imply internal absence. A major problem with much social cognition research is that expressed thought

is presumed to structurally and functionally correspond to internal thought which in turn, is presumed to be linguistically structured such that concrete responses to an experimenter reflect an inability to abstract experiences derived from social interactions into a structured and coherent whole. Bigelow and La Gaipa (1980) propose that "social concepts may be inherently verbal" (page 19), going on to assert the following:

"It cannot be assured that a child who has developed an understanding of a given concept will be able to verbalize it effectively . . . We can only assume, for the time being, that comprehension and expressive ability are tightly related."

(page 23, my emphasis)

Thus, what should be a hypothesis is treated like a theoretical premise. Similarly, Serafica (1982) writes:

"A decrease with age in the use of concrete responses and an age-related increase in the use of abstract responses also characterizes children's descriptions of the means used to form, maintain and terminate friendships. Thus, there is some tentative support for the hypothesis that the capacity for abstraction underlies at least the representation of a friend."

(page 110, my emphasis)

Linguistic sophistication is thereby a necessary requisite of social sophistication. This approach has not gone unchallenged. Walkerdine (1982) argues that experimental tasks requiring the child to manifest some particular form of reasoning also implicitly require him

to concentrate on the way in which he expresses his thoughts.

"Abstract reasoning . . . requires conscious reflection on the linguistic structure of the discourse itself." (page 129)

Ervin-Tripp and Keenan (1977) question the generalizability of verbal reports derived in socially distinct contexts, arguing that "speakers are incapable of reporting out of context those aspects of language which are variant according to social or situational context" (page 1). Indeed, Donaldson (1978) also stresses the determinative role of contextual variables in reasoning:

"It is when we are dealing with people and things in the context of fairly immediate goals and intentions that we feel most at home . . . when we move beyond the bounds of human sense there is a dramatic difference. Thinking which does move beyond these bounds, so that it no longer operates within the supportive context of meaningful events, is often called 'formal' or 'abstract'. (page 76)

Thus, in asking children questions about their relationships, it may not be only their conceptions of the interpersonal influencing their responses.

Vygotsky (1962) makes an important distinction between spontaneous concepts acquired as a result of everyday experiences and scientific concepts acquired contrastively in specifically didactic contexts, involving a "mediated attitude towards its object" (page 108). Scientific concepts begin with a verbal definition and are later filled in with concrete experiences. Spontaneous

concepts, on the other hand, proceed in the reverse direction, beginning with concrete experiences and culminating in verbal articulation. Thus, a child may not be able to clearly define the concept of 'brother' yet present an adequate definition of the concept of 'exploitation', though the latter, in contrast to the former, is "schematic" and lacking the "rich content derived from personal experience" (page 108). Similarly, a child may not be able to identify grammatical forms in his native language yet do so competently in a foreign language he is learning. Vygotsky's assertions are based on his experiments in which primary school children were presented with problems to solve dealing with either scientific or everyday concepts. He found that children experienced less difficulty in dealing with the former than the latter.

Expression does not necessarily mirror concept. Selman's (1980) remark that "Children who do not reflectively understand mutuality . . . may still happen to act in mutually coordinated ways" (page 263) may be answered with Vygotsky's (1962) remark that the "child becomes conscious of his spontaneous concepts relatively late; the ability to define them in words, to operate with them at will, appears long after he has acquired the concepts" (page 108). Further, any generalizations from the hypothetical (experimental) context to the real context are necessarily inductive. ^{New paragraph} Throughout this thesis, I have stressed the importance of social context in considerations of children's

relationships. As stated in Chapter 5, content cannot be extracted from context and adequately understood. The signification of a social act is inextricably framed within a social context. The results of analyses conducted in this thesis vindicate such an assertion. Awareness of this social context, i.e., of relationships, is thus necessary for the structuring of interactions. Social knowledge is necessarily operative and framed within a context that is active and dynamic. It is therefore "more uncertain and more sensitive to current informational conditions than physical knowledge" (Glick, 1978; page 3). A social structure that is organized and coherent presumes an awareness that is organized and coherent. ^{F New paragraph} The social structure perceived in this research endeavour directly challenges a solipsistic portrait of the child as without interest in the other beyond momentary interchanges based on personal involvement in an activity. It necessitates an awareness of the other as subjectively distinct from the self. It presupposes an actively interpretive process to render the social world meaningful:

"A child who is trying to figure out what other people mean must be capable of recognizing intentions in others, as well as having them himself. And such a child is by no means wholly unable to decentre. While he may certainly, like the rest of us, fail to appreciate the relativity of his own point of view, he is capable of escaping from it. Thus he is not debarred by egocentrism from communicating with us and relating to us in a

personal way. Indeed personal relations appear to form the matrix within which his learning takes place."

(Donaldson, 1978; page 88)

The child acts upon his social world with intended effect and these intentions are differentially apprehended by peers. This thesis ends with the assertion that children do not view their social world as a plane of spatially juxtaposed peers but rather, within an intrinsically meaningful framework whose signification resides within relationships. Hence the social world of the child evades procrustean efforts at explication in intra-individualistic terms.

Criticisms and implications for future research

The results obtained in this thesis are necessarily constrained by the fact that they pertain to one particular nursery class and further, the sample is quite small. Hence these findings need to be replicated in other nurseries before one can ascertain whether or not children do as a rule selectively structure differential relationships when sharing an environment with several individuals. Though the taxonomic system was not difficult to apply, it did contain an excessive number of sub-categories both from the point of view of stated research goals (i.e., in Chapter 4 where the research task was to demonstrate thematic consonance) and from the point of view of paring data to a minimum (i.e. in Chapters 5 and 6, the 'reject theme', 'reject person' and 'inclusion' categories).

Over-categorising did render analyses problematic and thus it was necessary to collapse sub-categories into their superordinate classifications in order to have sufficient data on each group.

Though I have been endeavouring to argue against the thesis of discontinuity between young children's relationships and those of adults, I have not been able to compare their relationships simply because there is a dearth of research on naturally occurring interactions in both groups. Indeed, Gottman and Parkhurst (1981) encountered a similar difficulty in their investigations of dyadic interactions in children:

"Friendship in children and adults has remained
a private world." (page 198)

This necessarily places constraints on assertions of continuity. Intuitive judgements had to be made about the types of processes underlying the formation and maintenance of relationships.

Whilst acknowledging these constraints, some suggestions for future research can be made on the basis of research conducted here. The results obtained do suggest that excessively restrictive paradigms have been employed in studies of early peer relations with the result that the social capacities of the young child have been underestimated. Social context has been neglected. A record of the identity of all children participating in an interaction and what transpires between participants appears to be central to a consideration of relationships in

revealing how children organize their interactions and types of relationships that prevail. A prominent argument of this thesis has been that isolated behaviours cannot in themselves reveal the relational contexts within which they occur. Conversations appear to provide an invaluable source of information. As noted in Chapter 2, many studies employ the broad taxon of 'conversation' or 'positive interaction' which may conceal the complexity of young children's interactions. These criticisms may be summarized in the assertion that greater attention should be given to the role of communication in the formation and maintenance of relationships in young children.

Comments on Statistical Analysis in Response to Questions
from the Examiners.

Contingency table analyses were undertaken in order to assess whether or not the classified behaviours were being employed differentially by individuals towards different groups of children. This method requires independence of behavioural units within an interaction sequence. But, can behaviours occurring within an interaction be composed only of discrete and independent events? In this thesis, social behaviours were assigned discrete classifications and were subsequently treated as individual occurrences of particular types of acts, as discussed in Chapter 2, page 49 and pages 54 to 55. It may be considered that an inflated estimation of behavioural frequencies was obtained by coding repetitions, i.e. functionally similar events that occur contiguously, as independent events. To obviate this difficulty, a twofold strategy can be employed for counting behaviours:

- (i) A group of functionally similar behaviours that occur contiguously in one interaction sequence should be counted as a single event. To illustrate:

- 1) Nancy (4) approaches,
- 2) Mary (4): "This is my room" DENY ACCESS
- 3) Nancy enters Mary's box
- 4) Mary: "No, I sleep here." DENY ACCESS

For the purposes of statistical analyses, statements 2) and 4) would be counted as a single act of 'exclusion'.

(ii) The above criterion requires a firm definition of each interactional sequence in terms of its commencement and its termination. This can be problematic in a nursery where some children are entering and leaving social circles of other children frequently and others, while together for the entire period of observation, are interacting intermittently. Obviously, the period of the observation session itself cannot be used to define the start or termination of behavioural interactions. These difficulties can be resolved by adopting the following operational definition of an interaction:

- 1) An interaction commences when two children, A and B, become involved together in an activity or a conversation.
- 2) An interaction terminates when
 - a) child A or B leaves the area
 - b) children A and B commence engagement in another activity.

In the latter case, the independence of behavioural units would be assessed on the basis of a change in the theme of discourse. This tactic would provide a means for analysing the interactions of children who are together for an entire observation session but who do not engage in one sustained interaction.

A further limitation of the contingency table analysis carried out in the thesis is that it is based on data drawn from a heterogeneous sample collected over a four-month period. The sample comprises children characterized by different activity levels who belong to groups of different sizes. The

analyses by group size for 'exclusion' and 'inclusion' (Chapters 5 and 6 respectively) were conducted separately to control for this situation. The constraints on analysis due to the different activity levels by different children are difficult to resolve because they vary widely in an uncontrolled way with the state of the child.

The problems posed by data collected over an extended period can be resolved by conducting separate analyses of data collected during specific months, i.e. during February, March, May and June respectively. This method would enable one to ascertain the consistency over time of the recorded behaviours and hence, to assess the stability of the observed social structure.

Appendix to Chapter 2: Subjects

<u>Pseudonym</u>	<u>Date of Birth</u>	
Arthur	25.12.74)	Monozygotic twins
Brian	25.12.74)	
Colin	22. 5.74	
Derick	24.12.74	
Edward	20. 3.75	
Fiona	13.11.74	
George	13. 8.74)	Dizygotic twins
Hamish	13. 8.74)	
Iain	11. 7.74	
Jimmy	20. 9.74	
Karen	23.10.74	
Linda	15. 9.74	
Mary	6.11.74	
Nancy	24. 7.75	

APPENDIX TO CHAPTER 3: Total initiation x target frequencies

T A R G E T:

	.	A	B	C	D	E	F	G	H	I	J	K	L	M	N	X	Y	Z
I N I T I A T I O N	A	0	81	112	122	73	83	29	25	32	31	3	31	11	23	59	42	9
	B	67	0	91	63	116	51	33	29	46	16	9	20	31	12	63	30	11
	C	71	73	0	107	65	23	54	20	45	23	10	49	15	8	44	20	6
	D	82	46	143	0	117	44	29	42	82	20	21	22	10	14	36	16	12
	E	38	73	52	101	0	78	19	18	17	24	3	19	6	12	52	28	5
	F	49	61	21	12	61	0	67	8	7	8	9	8	4	7	53	51	3
	G	7	19	23	13	8	36	0	42	136	59	7	3	8	6	49	17	10
	H	7	7	8	25	19	5	73	0	11	36	5	6	1	4	48	21	8
	I	7	26	26	61	11	8	96	23	0	66	2	11	14	9	34	27	3
	J	16	5	12	3	10	6	84	42	82	0	5	6	16	24	53	29	6
	K	0	0	2	4	0	1	3	2	0	7	0	189	13	27	41	29	4
	L	14	8	16	11	12	7	8	8	17	9	208	0	12	20	48	50	14
	M	0	4	9	3	1	17	1	1	9	8	10	14	0	83	144	34	2
	N	7	4	2	4	7	5	7	2	5	19	17	11	89	0	69	25	2
	X	9	15	6	3	29	19	15	10	3	14	22	12	78	49	0	6	1
	Y	32	16	22	4	27	29	14	20	18	31	24	35	30	17	25	0	2
	Z	0	8	7	1	7	0	3	2	3	1	4	7	0	4	2	0	0

- A to N : Sample children
- X : Younger children
- Y : Teachers
- Z : Adult Visitors

APPENDIX 1 TO CHAPTER 4.

OPEN INITIATION - OPEN RESPONSE

		<u>R E S P O N S E</u>												
		1	2	3	4	5	6	7	8	9	10	11	12	13
		INTRO	RAD	TANG	R+DEV	A.DIV	A.RET	N.SIG	IMIT	S.REP	ATHEM	INCID	PAREN	INAPP
I N I T I A T I O N	1 INTRO	0	436	46	19	0	0	31	41	25	7	9	6	0 620
	2 RAD	4	860	144	34	5	27	80	65	96	35	50	94	1 1495
	3 TANG	0	164	30	5	0	3	9	25	31	15	10	21	1 314
	4 R+DEV	0	36	11	9	0	1	4	10	15	4	4	4	1 99
	5 A.DIV	2	46	7	2	1	38	7	5	7	1	9	6	0 131
	6 A.RET	0	127	25	7	2	2	14	13	23	12	12	18	0 255
	7 N.SIG	19	57	22	10	1	16	189	39	67	3	8	44	0 475
	8 IMIT	0	65	19	6	1	9	18	39	13	3	6	15	0 194
	9 S.REP	2	83	28	20	4	10	36	23	58	8	7	26	0 305
	10 ATHEM	0	2	3	0	18	27	2	2	6	2	2	3	0 67
	11 INCID	0	7	2	1	39	46	3	4	7	1	4	8	1 123
	12 PAREN	0	15	1	5	79	74	12	18	15	2	2	24	0 247
	13 INAPP	0	1	0	0	0	0	1	1	1	0	0	2	0 6
		27	1899	338	118	150	253	406	285	364	93	123	271	4 4331

APPENDIX 2 to CHAPTER 4

OPEN INITIATION - CLOSED RESPONSE

R E S P O N S E

		1	2	3	4	5 \ 6	7	8	9	10		
		RAD	TANG	A.DIV	A.RET	S.REP	IMIT	ATHEM	INCID	PAREN	INAPP	
INITIATION	1 INTRO	76	7	1	0	0	0	6	1	0	2	93
	2 RAD	86	9	3	2	8	2	16	9	10	0	145
	3 TANG	20	2	0	0	3	0	2	0	3	0	30
	4 R+DEV	5	0	1	0	0	0	0	0	2	0	8
	5 A.DIV	7	0	0	1	1	0	0	0	3	0	12
	6 A.RET	13	1	0	1	2	0	5	1	2	0	25
	7 N.SIG	50	1	1	2	2	0	12	4	10	3	85
	8 IMIT	8	4	0	3	1	1	1	1	4	0	23
	9 S.REP	20	2	1	1	2	0	5	2	5	0	38
	10 ATHEM	0	0	7	7	0	0	2	0	0	0	16
	11 INCID	0	0	4	3	0	0	1	0	0	0	8
	12 PAREN	3	0	23	10	0	0	3	0	4	1	44
	13 INAPP	14	2	0	0	0	0	2	2	0	0	20
		302	28	41	30	19	3	55	20	43	6	547

APPENDIX 3 TO CHAPTER 4

CLOSED INITIATION - CLOSED RESPONSE

R E S P O N S E

INITIATION

	1	2	3	4	5	6	7	8	9	10	
	RAD	TANG	A.DIV	A.RET	S.REP	IMIT	ATHEM	INCID	PAREN	INAPP	
1 RAD	126	16	1	2	36	14	6	5	7	6	219
2 TANG	19	4	2	0	2	7	1	2	0	0	37
3 A.DIV	17	1	1	0	12	5	2	0	4	2	44
4 A.RET	10	1	1	0	5	1	2	0	2	0	22
5 S.REP	33	9	3	1	21	5	5	0	3	1	81
6 IMIT	9	2	1	1	3	10	1	1	0	0	28
7 ATHEM	3	0	22	3	4	0	3	0	0	0	35
8 INCID	0	0	11	1	1	0	0	1	0	0	14
9 PAREN	6	1	14	2	6	4	1	0	8	0	42
10 INAPP	4	0	0	0	1	0	0	0	1	0	6
	227	34	56	10	91	46	21	9	25	9	528

APPENDIX 4 TO CHAPTER 4

CLOSED INITIATION - OPEN RESPONSE

RESPONSE

		1	2	3	4	5	6	7	8	9	10	11	12	13		
		INTRO	RAD	TANG	R+DEV	A.DIV	A.RET	N.SIG	IMIT	S.REP	ATHEM	INCID	PAREN	INAPP		
INITIATION	1	RAD	2	83	23	1	0	15	31	3	14	8	6	23	13	222
	2	TANG	0	11	4	0	0	1	2	1	1	1	6	23	13	63
	3	A.DIV	0	8	1	0	0	11	2	2	2	1	0	10	0	37
	4	A.RET	0	3	2	0	0	1	3	0	1	1	2	1	0	14
	5	S.REP	0	6	7	0	1	7	1	0	1	0	1	4	0	28
	6	IMIT	1	0	2	0	0	2	0	0	1	0	9	6	13	34
	7	ATHEM	0	3	0	0	3	8	1	0	1	0	1	0	1	18
	8	INCID	0	2	0	0	0	8	0	0	2	0	0	0	0	12
	9	PAREN	0	1	0	1	6	5	3	0	0	0	0	5	4	25
	10	INAPP	0	1	1	0	0	1	2	0	0	0	0	0	0	5
		3	118	40	2	10	59	45	6	23	11	25	72	44	458	

APPENDIX To CHAPTER 6.

LOCATION	G R O U P			
	1	2	3	4
hospital	189 (77.2) <u>22.8</u>	30 (20) <u>80</u>	29 (44.8) <u>55.2</u>	44 (6.8) <u>93.2</u>
Wendy House	145 (67.6) <u>32.4</u>	66 (25.7) <u>74.3</u>	37 (13.5) <u>86.5</u>	47 (17) <u>83</u>
climbing frame	563 (72.6) <u>27.4</u>	198 (33.8) <u>66.4</u>	98 (29.6) <u>70.4</u>	69 (21.7) <u>78.3</u>
snack table	653 (69.1) <u>30.9</u>	206 (32.5) <u>67.5</u>	55 (3.6) <u>96.4</u>	78 (15.4) <u>84.6</u>
art	100 (77) <u>23</u>	110 (57.2) <u>42.8</u>	194 (75.3) <u>24.7</u>	24 (8.3) <u>91.7</u>
puzzles	83 (46.9) <u>53.1</u>	38 (2.6) <u>97.4</u>	75 (58.7) <u>41.3</u>	41 (19.5) <u>80.5</u>
wood	87 (37.9) <u>62.1</u>	186 (74.2) <u>25.8</u>	50 (46) <u>54</u>	5 - <u>100</u>
water	62 (88.7) <u>11.3</u>	3 - <u>100</u>	3 - <u>100</u>	5 - <u>100</u>
sand	75 (61.3) <u>29.7</u>	14 (14.3) <u>85.7</u>	13 (30.8) <u>69.2</u>	10 (10) <u>90</u>
books	57 (61.4) <u>38.6</u>	12 (33.3) <u>66.7</u>	6 (66.7) <u>33.3</u>	23 (43.5) <u>56.5</u>
non-activity	49 (71.4) <u>28.6</u>	43 (55.8) <u>44.2</u>	32 (34.3) <u>65.7</u>	19 (21.1) <u>78.9</u>
crispie	13 (46.2) <u>53.8</u>	12 (41.7) <u>58.3</u>	6 - <u>100</u>	66 (13.6) <u>86.4</u>
dough table	135 (67.4) <u>32.6</u>	152 (86.2) <u>13.8</u>	46 (32.6) <u>67.4</u>	17 - <u>100</u>
boxes	1131 (76) <u>24</u>	465 (54.2) <u>45.8</u>	37 (10.8) <u>89.2</u>	111 (45.9) <u>54.1</u>
cash register	241 (34.9) <u>65.1</u>	66 - <u>100</u>	2 - <u>100</u>	3 - <u>100</u>
see saw	29 (62.1) <u>27.9</u>	5 (20) <u>80</u>	17 (11.8) <u>88.2</u>	40 (72.5) <u>27.5</u>
combination	227 (85.9) <u>14.1</u>	3 - <u>100</u>	91 (37.4) <u>62.6</u>	18 (11.1) <u>88.9</u>
dressing up	46 (100) -	-	51 (41.2) <u>58.8</u>	27 (63) <u>27</u>
music	12 (25) <u>75</u>	46 (84.8) <u>15.2</u>	28 (67.9) <u>32.1</u>	22 (31.8) <u>68.2</u>

000 - total frequency (000) - internal interactions, %
000 - external interactions, %

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